

**Permittee: Department of Energy (DOE) and DOE-Designated Contractors, Idaho National Laboratory (INL) Partial Permit Number: EPA ID# ID4890008952**

### **INTRODUCTION AND SIGNATURE PAGE**

Pursuant to the Idaho Hazardous Waste Management Act of 1983 (HWMA), Idaho Code § 39-4401 et seq., and the *“Rules and Standards For Hazardous Waste,”* as amended, IDAPA 58.01.05.000 et seq., specifically IDAPA 58.01.05.012 [40 CFR § 270.1(c)(4)], a Partial Permit (for less than the entire facility) is hereby issued to the United States Department of Energy (DOE) and DOE-designated contractor (see “Operator” in the Permit Definitions), hereinafter called the Permittee, to operate a hazardous waste treatment and storage facility at the Advanced Mixed Waste Treatment Project (AMWTP), located on the Idaho National Laboratory (INL), located in Butte County, Idaho.

The Permittee shall comply with all of the terms and conditions of this Partial Permit (Permit), and Attachments 1 through 9 of this Permit. The Permittee shall comply with all applicable state regulations, including IDAPA 58.01.05.004 through 58.01.05.013 [40 Code of Federal Regulations (CFR), Parts 124, 260 through 266, 268, and 270], and as specified in this Permit.

Applicable state regulations are those which are in effect on the date of final administrative disposition of this Permit and any self-implementing statutory provisions and related regulations which, according to the requirements of the Hazardous and Solid Waste Amendments (HSWA), are automatically applicable to the Permittee’s hazardous waste management activities, notwithstanding the conditions of this Permit.

This Permit is based upon the administrative record, as required by IDAPA 58.01.05.013 [40 CFR § 124.9]. The Permittee’s failure, in the application or during the permit issuance process, to fully disclose all relevant facts, or the Permittee’s misrepresentation of any relevant facts, at any time, shall be grounds for the termination or modification of this Permit and/or initiation of an enforcement action, including criminal proceedings. To the extent there are inconsistencies between the Permit and the attachments, the language of the permit shall prevail. The Permittee must inform the Director of the Idaho Department of Environmental Quality (hereinafter referred to as “Director”) of any deviation from the permit conditions or changes in the information on which the application is based, which would affect the Permittee’s ability to comply or actual compliance with the applicable regulations or permit conditions, or which alters any permit condition in any way. The Director shall enforce all conditions of this Permit, which are designated in this Permit as state requirements. Any challenges of any permit condition that concern requirements shall be appealed to the Director, in accordance with IDAPA 58.01.05.996 and the Idaho Department of Environmental Quality Rules and Regulations 58.01.23.000 et seq., *“Rules Governing Contested Cases and Declaratory Rulings.”*

The United States Environmental Protection Agency (EPA) shall maintain an oversight role of the state-authorized program, and in such capacity, shall enforce any permit condition based on state requirements if, in the EPA’s judgment, the Director should fail to enforce that permit condition. Any challenges to the EPA-enforced conditions shall be appealed to the EPA, in accordance with [40 CFR § 124.19].

This Permit is effective as of 04/04/08 and shall remain in effect until 04/04/2018 unless, in accordance with IDAPA 58.01.05.012, the Permit is revoked and reissued [40 CFR § 270.41], modified [40 CFR § 270.42, Appendix I.A.6], terminated [40 CFR § 270.43], or continued [40 CFR § 270.51].

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Date

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Toni Hardesty, Director  
Idaho Department of Environmental Quality

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The following documents are excerpts from the Permittee's Administrative Record, i.e., the AMWTP HWMA/RCRA Permit Application, supplemental reports, and other documents contained in the Department's supporting file for the Permit.

The Director has, as deemed necessary, modified specific language in the Attachments. These modifications are described in the permit conditions (Modules I through VI), and thereby supersede the language of the Attachments. These incorporated Attachments are enforceable conditions of this Permit as modified by the specific permit condition(s).

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|--------------------------|---|
| <b>Attachment 1</b>      | <b>Facility Description, consisting of:</b> <ul style="list-style-type: none"><li>• Section B, Facility Description, pages 1 – 26.</li></ul>  |
| <b>Attachment 1.A</b>    | <b>Process Description for WMF-634, consisting of:</b> <ul style="list-style-type: none"><li>• Section D, Process Information, pages 1 – 33.</li></ul>                                      |
| <b>Attachment 1.B</b>    | <b>Process Description for the Type II Modules (WMF-629 through WMF-633), consisting of:</b> <ul style="list-style-type: none"><li>• Section D, Process Information, pages 1 – 9.</li></ul> |
| <b>Attachment 1.C</b>    | <b>Process Description for the Type I Module, consisting of:</b> <ul style="list-style-type: none"><li>• Section D, Process Information, pages 1 – 14.</li></ul>                            |
| <b>Attachment 1.D</b>    | <b>Process Description for the SWEPP, consisting of:</b> <ul style="list-style-type: none"><li>• Section D, Process Information, pages 1 – 12.</li></ul>                                    |
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| <b>Attachment 1.F</b>    | <b>Process Description for WMF-676, consisting of:</b> <ul style="list-style-type: none"><li>• Section D, Process Information, pages 1 – 20.</li></ul>                                      |
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<b>Attachment 4</b>	<b>Inspections, consisting of:</b> <ul style="list-style-type: none"><li>• Section F-2, Inspection Schedule, pages 1 – 33.</li></ul>
<b>Attachment 5</b>	<b>Training Plan, consisting of:</b> <ul style="list-style-type: none"><li>• Section H, Training Plan, pages 1 – 6.</li></ul>
<b>Attachment 6</b>	<b>Preparedness and Prevention Plan, consisting of:</b> <ul style="list-style-type: none"><li>• Section F-3, Preparedness and Prevention Requirements, pages 1 – 21.</li></ul>
<b>Attachment 7</b>	<b>Contingency Plan, consisting of:</b> <ul style="list-style-type: none"><li>• Section G, Contingency Plan, pages 1 – 35.</li></ul>
<b>Attachment 8</b>	<b>Closure Plan, consisting of:</b> <ul style="list-style-type: none"><li>• Section I, Closure Plan, pages 1 – 2.</li></ul>
<b>Attachment 8.A</b>	<b>WMF-634 Closure Plan, consisting of:</b> <ul style="list-style-type: none"><li>• Sections I-1 through I-6, WMF-634 Closure Plan, pages 1–15.</li></ul>
<b>Attachment 8.B</b>	<b>Type II Modules Closure Plan, consisting of:</b> <ul style="list-style-type: none"><li>• Sections I-1 through I-6, Type II Modules Closure Plan, pages 1 – 7.</li></ul>

- Attachment 8.C      Type I Module Closure Plan, consisting of:**
- Sections I-1 through I-6, Type I Closure Plan, pages 1 – 7.
- Attachment 8.D      SWEPP Closure Plan, consisting of:**
- Sections I-1 through I-6, SWEPP Closure Plan, pages 1 – 7.
- Attachment 8.E      WMF-676 Closure Plan, consisting of:**
- Sections I-1 through I-6, WMF-676 Closure Plan, pages 1 – 7.
- Attachment 9      Permit Modification Log and Page Change-Out Lists, consisting of:**
- Attachment 9 shall be used to track the current revision of the permit, Attachments, and the Application. The permit modification log shall record each permit modification, the portion of the permit affected, the date the modification was posted to the permit, and either a reference to a page change out sheet, or if fewer than three pages of attachment are revised, a list of the page changes.

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<b>Appendix XII</b>	<b>Box Line Drawings/Exhibits, consisting of:</b> <ul style="list-style-type: none"><li>• Cover page</li><li>• Drawing 53-0208, Revision 7</li><li>• Drawing 53-0209, Revision 7</li></ul>
<b>Appendix XIII</b>	<b>Box Line Mechanical Data Sheets, consisting of:</b> <ul style="list-style-type: none"><li>• Cover page</li><li>• 15 Mechanical Data Sheets</li></ul>
<b>Appendix XIV</b>	<b>Material Transfer System Mechanical Data Sheets</b> <ul style="list-style-type: none"><li>• Cover page</li><li>• 3 Mechanical Data Sheets</li></ul>
<b>Appendix XV</b>	<b>Special Case Waste and Drum Repack System Drawings/Exhibits, consisting of:</b> <ul style="list-style-type: none"><li>• Cover page</li><li>• Exhibit XV-1, Revision 00</li><li>• Exhibit XV-2, Revision 00</li><li>• Exhibit XV-3, Revision 00</li><li>• Exhibit XV-4, Revision 00</li><li>• Exhibit XV-5, Revision 00</li><li>• Exhibit XV-6, Revision 01</li><li>• Exhibit XV-7, Revision 00</li><li>• Exhibit XV-8, Revision 01</li><li>• Exhibit XV-9, Revision 00</li><li>• Drawing 53-9744, Revision 07</li><li>• Exhibit XV-10, Revision 00</li></ul>
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## DEFINITIONS

All definitions contained in IDAPA 58.01.05.004, 005, 008, and .010 through .013 [40 CFR Parts 260, 261, 264, 266, 268, 270, and 124] are hereby incorporated, in their entirety, by reference into this Permit, except that any of the definitions used below shall supersede any definition of the same term given in IDAPA 58.01.05.000 et seq., 40 CFR Part 260 et seq. Where terms are not defined in the regulations or this Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

For purposes of this Permit, the following definitions shall apply:

- a) "Agency" shall mean the United States Environmental Protection Agency, Region 10.
- b) "Application" shall mean the HWMA/RCRA Permit Application for the Advanced Mixed Waste Treatment Project, submitted December 2007.
- c) "As-Built Drawing" shall be defined by the pertinent State of Idaho Code and Idaho Administrative Rules pertaining to the State of Idaho Board of Professional Engineers.
- d) "Criticality Cleanout" shall mean the cleanout of a treatment process area, as identified in Table D-3 of Attachment 1.F of this Permit, or a portion of a treatment area such that residual waste left in the treatment process does not contain significant quantities of fissile material.
- e) "Containment enclosure" shall mean a moveable, non-permanent structure used to provide contamination control during container management, as described in Attachment 1.A of this permit.
- f) "Curb" shall mean the portion of a concrete block wall, cast-in-place concrete barrier, or other barrier that is sealed with containment coating from the floor up to the required containment height specified by the secondary containment system analysis.
- g) "Days" shall mean calendar day(s) unless specified otherwise. Any requirement of submittal under the terms of this Permit that would be due on a Saturday, Sunday, or a state or federal holiday shall be due on the following business day.
- h) "Debris," as defined by Title 40 of the Code of Federal Regulations (CFR) § 268.2, shall mean a solid material exceeding a 60-mm particle size that is intended for disposal and is: 1) a manufactured object; 2) or plant or animal matter; or 3) natural geologic material. The following materials are not debris: Any material for which a specific treatment standard is provided in Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by 40 CFR § 268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

- i) "Decanting" shall mean to pour off liquid gently from one container to another, or to transfer liquid from one container to another through use of appropriate equipment.
- j) "Decontamination" shall mean the removal of radiological contamination, Hazardous Waste Management Act hazardous chemicals, or residues from structures or equipment.
- k) "Department" shall mean the Idaho Department of Environmental Quality.
- l) "Director" shall mean the Director of the Idaho Department of Environmental Quality, or his or her designee or authorized representative.
- m) "Discovery (discovered)" shall mean the initial identification of a Solid Waste Management Unit or other Area of Concern that has the potential to release hazardous/mixed waste or hazardous waste constituents to the environment.
- n) "DOE" shall mean the United States Department of Energy.
- o) "Existing inventories" shall mean all waste received at the Transuranic Storage Area on or prior to September 11, 1991 (the submittal date of the Part B Permit Application for the Intermediate Level Transuranic Storage Facility and the Waste Storage Facility).
- p) "Explosive/Class I Explosive" shall mean either a division 1.1, 1.2., 1.3. or 1.5 material as defined by the Department of Transportation (49 CFR 173)
- q) "Facility" shall mean all contiguous land, structures, other appurtenances, and improvements under the control of the Department of Energy at the Idaho National Laboratory for a total of approximately 890 square miles or 601,260 acres. The metes and bounds of the Idaho National Laboratory are set forth in the November 21, 1989, Federal Register at 54 FR48184.
- r) "Hazardous waste" shall mean a solid waste, or combination of solid wastes, which, because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, an increase in mortality or an increase in a serious irreversible, or incapacitating reversible, illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed [See Public Law 98616, Section 1004(5) and 42 United States Code Section 6903(5)].
- s) "Hazardous waste constituent" shall mean any constituent identified in Appendix VIII of IDAPA 58.01.05.005 [40 CFR Part 261], or any constituent identified in Appendix IX of IDAPA 58.01.05.008 [40 CFR Part 264].
- t) "Hazardous waste management unit" or "HWMU" shall mean those operable units subject to the requirements of IDAPA 58.01.05.012 [40 CFR §§ 270.14 through 270.27].
- u) "HSWA" shall mean the Hazardous and Solid Waste Amendments of 1984, as amended.
- v) "HWMA" shall mean the Idaho Hazardous Waste Management Act of 1983, as amended, Idaho Code § 39-4401, et seq.

- w) "IDAPA" shall mean the Idaho Administrative Procedures Act, Chapter 52, Title 67, Idaho Code.
- x) "INL" shall mean the Idaho National Laboratory, the facility.
- y) "Liquid, free" shall mean liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.
- z) "Liquid, residual" shall mean liquids accumulated in the sumps and other containment devices in the mixed waste management units that are removed and containerized, or otherwise managed appropriately (e.g., via absorption, neutralization).
- aa) "Management" or "Manage" when related to the management of wastes shall mean the treatment, storage, processing, and transfer of waste within and between the mixed waste management units as specified in this Permit.
- bb) "Mixed waste" shall mean waste which is both hazardous and radioactive.
- cc) "Mixed waste management units (MWMUs)" shall mean those operable units subject to the requirements of IDAPA 58.01.05.012 [40 CFR § 270.14 thru 27] that manage mixed waste only. Current defined mixed waste management units for the AMWTP HWMA/RCRA Permit include the Type I Module (WMF-635), the Type II Modules (WMF-628, WMF-629, WMF-630, WMF-631, WMF-632, and WMF-633), the Waste Characterization Facility (WMF-634), the Stored Waste Examination Pilot Plant (WMF-610) and the Advanced Mixed Waste Treatment Facility (WMF-676).
- dd) "Newly-generated waste" shall mean all waste received at the Transuranic Storage Area after September 11, 1991 (the submittal date of the Part B Permit Application for the Intermediate Level Transuranic Storage Facility and Waste Storage Facility [see existing inventories]).
- ee) "off-Site waste" shall mean waste received from any facility or installation other than the Idaho National Laboratory.
- ff) "on-Site waste" shall mean waste received from the Idaho National Laboratory.
- gg) "Operator" shall mean the Department of Energy Designated Contractor, that has operational responsibilities and control of the mixed/hazardous waste management units. The Department of Energy Designated Contractor as operator for the mixed waste management units is Bechtel BWXT Idaho, LLC (BBWI). BBWI reports to the Department of Energy – Idaho Operations Office.
- hh) "Owner" shall mean the United States Department of Energy.
- ii) "Permit" shall mean this Permit issued by the Idaho Department of Environmental Quality, pursuant to Idaho Code § 39-4401 et seq. [42 United States Code 3251 et seq.] and IDAPA 58.01.05.000 et seq. [40 Code of Federal Regulation Parts 124 and 270].
- jj) "Permittee" shall mean both the Department of Energy as owner and the Department of Energy Designated Contractor as operator.

- kk) "Prohibited waste" shall mean wastes that are prohibited from acceptance at the mixed waste management units, such as those that are (or have the potential to be) pyrophoric, explosive, unstable, shock-sensitive, or reactive waste.
- ll) "Puck" shall mean a drum that has been supercompacted.
- mm) "RCRA" shall mean the Resource Conservation and Recovery Act of 1976, as amended by Hazardous and Solid Waste Amendments in 1984, 42 United States Code, Section 6901, et seq.
- nn) "Readily retrievable," shall mean available upon request from the Director, given the following: 1) Provided to the Director within one working day if the document is less than three years old; and, 2) Provided to the Director within seven working days if the document is greater than three years old.
- oo) "Record Drawing" shall be defined by the pertinent State of Idaho Code and Idaho Administrative Rules pertaining to the State of Idaho Board of Professional Engineers.
- pp) "Release" shall mean any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous/mixed wastes (including hazardous waste constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous/mixed wastes or hazardous waste constituents).
- qq) "Repackaging" shall mean to take waste from a container(s) and place it into another container(s) through use of appropriate equipment, so as to render the waste non-hazardous or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. It shall not include sampling, overpacking, and un-overpacking activities. Sizing may be performed, as required, as an incidental part of treatment by repackaging.
- rr) "Segregate" shall mean to set apart from the general population of waste through the use of physical barriers such as a dike, berm, wall, containment pallet, etc. in order to prevent wastes from commingling.
- ss) "Separate" shall mean to set apart from the general population of waste through the use of distance in order to prevent waste from commingling.
- tt) "Sizing" shall mean to physically alter the size of waste through the use of hand operated (manual and powered) portable equipment (e.g., reciprocating saw, hand saw, nibblers, etc.) so as to render the waste non-hazardous or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. Repackaging may be performed, as required, as an incidental part of treatment by sizing.
- uu) "Special case waste" or "SCW" shall mean those wastes that are not suitable for direct treatment via the primary WMF-676 supercompaction treatment process.
- vv) "Storage" shall mean the management of waste in lidded containers in accordance with the applicable requirements specified in this Permit. For WMF-676 only, storage areas are identified in Table D-3 of Attachment 1.F. Four types of containers may be located

in storage in WMF-676 at any given time. These containers are: 1) containers with lids, 2) empty containers with or without lids, 3) unlidded transfer containers containing containerized waste, and 4) unlidded transfer containers containing uncontainerized waste. Uncontainerized waste may be located in storage areas for up to 24 hours. For example, the 24 hour time period would start from the time the unlidded transfer container, with uncontainerized waste, is removed from room 125B or 124B until the unlidded transfer container is received at the SCW glovebox system, other treatment area; or the container is lidded with either a temporary or permanent lid.

- ww) "Transfer Container" shall mean an unlidded container, typically a 55-gallon drum, which is used to transport waste(s) to and from various locations within WMF-676.
- xx) "Treatment" in addition to the definition in IDAPA 58.01.05.004 (40 CFR § 260.10), shall mean those areas where containerized or uncontainerized wastes are treated. Waste located within a treatment area, as defined throughout the Permit, will be identified as "in treatment." Waste being treated does not require removal from a treatment process per a specified time frame during normal operations. When a shutdown, either scheduled or unscheduled, occurs that will exceed fourteen (14) calendar days, a criticality cleanout of all shutdown treatment processes or portions of treatment processes will be performed and all uncontainerized waste will be containerized; or the State of Idaho Department of Environmental Quality will be notified of the shutdown and the path forward to resuming normal operations will be determined.
- yy) "Unknown wastes" shall mean wastes with unknown item description codes, waste groups, and/or Environmental Protection Agency hazardous waste numbers following real time radiography examination or wastes with known item description codes/waste groups, but unknown Environmental Protection Agency hazardous waste numbers.
- zz) "Variable geometry door" shall mean a door or aperture, the opening of which can be varied in size or horizontal/vertical orientation.
- aaa) "Waste Group" shall mean a group of item description codes that are similar in physical properties (e.g., combustible waste, soil, solidified organics, etc.), but may have different chemical compositions and originate from different processes/sources.
- bbb) "Waste Storage Facility" (WSF) shall mean those operable units subject to the requirements of IDAPA 58.01.05.012 [40 CFR § 270.14-.27] that manage mixed waste only. Current defined WSF operable units for the AMWTP HWMA/RCRA Permit includes the Type I Module (WMF-635), the Type II Modules (WMF-628, WMF-629, WMF-630, WMF-631, WMF-632, and WMF-633), and the Waste Characterization Facility (WMF-634).
- ccc) "Waste Stream" shall mean a group of item description codes that are similar in physical form and have similar chemical constituents.

Acronyms and abbreviations used in this Permit are defined as designated in the Acronyms and Abbreviations section of this Permit.



## ACRONYMS AND ABBREVIATIONS

%	percent
AASHTO	American Association of State Highway Testing Officials
ACI	American Concrete Institute
AEA	Atomic Energy Act
AES	Architectural Engineering Standards
ALARA	as low as reasonably achievable (radiation exposures)
AMWTF	Advanced Mixed Waste Treatment Facility
AMWTP	Advanced Mixed Waste Treatment Project
ANSI	American National Standards Institute
ANL-E	Argonne National Laboratory - East
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
BBWI	Bechtel BWXT Idaho, LLC
CAM	continuous air monitor
CCR	central control room
CCS	central conveyor system
CCTV	closed circuit television
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFA	Central Facilities Area
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CMMS	computer maintenance management system
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CPR	cardiopulmonary resuscitation
CRSI	Concrete Reinforcing Steel Institute
CW	combustible waste
DCSRS	drum core sample retrieval system

DEQ	Department of Environmental Quality
DMS	data management system
DOE	Department of Energy
DOE-ID	Department of Energy - Idaho Operations Office
DOHE	Drum Opening Hood Enclosure
DOT	Department of Transportation
DVF	drum venting facility
DVS	drum venting system
DWHE	drummed waste handling enclosure
DWPG	drummed waste packaging glovebox
EAM	Emergency Action Manager
EBR-I	Experimental Breeder Reactor I
EC	Emergency Coordinator
EDF	engineering design file
EMT	Emergency Medical Technician
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
ERO	Emergency Response Organization
ERPG	Emergency Response Planning Guides
oF	degree(s) Fahrenheit
F	filter(s)
ft	foot or feet
ft <sup>2</sup>	square feet
FACP	fire alarm control panel
FFA	Federal Facilities Agreement
FFA/CO	Federal Facilities Agreement/Consent Order
fpm	feet per minute
FRP	fiberglass-reinforced plywood
G	graphite
gal	gallon(s)
GC/MS	gas chromatography/mass spectrometry
GFI	ground fault interrupter
gpm	gallons per minute

gpm/ft2	gallons per minute per square foot
H2	hydrogen
HAZMAT	hazardous material
HAZWOPER	Hazardous Waste Operations and Emergency Response
HD	heterogeneous debris
HDPE	high-density polyethylene
HEPA	high-efficiency particulate air
hr	hour(s)
HSWA	Hazardous and Solid Waste Amendments of 1984
HVAC	heating, ventilation, and air conditioning
HW	hazardous waste
HWMA	Hazardous Waste Management Act of 1983, as amended
HWMU	hazardous waste management unit
HWN	EPA hazardous waste number
IDAPA	Idaho Administrative Procedures Act
IDC	item description code
in.	inch(es)
INL	Idaho National Laboratory
INM	inorganic nonmetal
IS	Interim Status
kV	kiloVolt
kW	kiloWatt
L	liter
lb	pound(s)
LCM	lead/cadmium metal
LDR	Land Disposal Restrictions
LLW	low-level waste
m	meter
m3	cubic meter
M&O	management and operations
MBMA	Metal Building Manufacturers Association
MDS	mechanical data sheet
MEI	maximally exposed individual

mg/m <sup>3</sup>	milligram per cubic meter
mil	millimeter
MOA	Memorandum of Agreement
MSA	Main Storage Area
MSDS	material safety data sheet
MTS	material transfer system
MW	mixed waste
MWMU	mixed waste management unit
nCi/g	nanocuries per gram
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NON	Notice of Noncompliance
OASIS	Organic and Sludge Immobilization System
OJT	on-the-job training
OSC	On-Scene Commander
OSHA	Occupational Safety and Health Administration
PA	public address
PAAA	Payload Assembly and Aspiration Area
PAG	Protective Action Guides
PAN	passive-active neutron
PCB	polychlorinated biphenyl
PM	preventive maintenance
PPE	personal protective equipment
ppm	parts per million
psi	pounds per square inch
PVC	polyvinyl chloride
QA	quality assurance
QAPjP	Quality Assurance Project Plan
QC	quality control
RCRA	Resource Conservation and Recovery Act
RFETS	Rocky Flats Environmental Technology Site
RGN	reactivity group number

ROW	radioactive only waste
RSSC	Recycled Shielded Storage Container
RTR	real time radiography
RWMC	Radioactive Waste Management Complex
SARA	Superfund Amendments and Reauthorization Act of 1986
SCW	special case waste
SDA	Subsurface Disposal Area
SI	solidified inorganic
SO	solidified organic
SSA	SWEPP Storage Area
STP	Site Treatment Plan
SVOC	semi-volatile organic compound
SW-846	"Test Methods for Evaluating Solid Waste: Physical/Chemical Methods," current edition
SW	salt waste
SWB	standard waste box
SWEPP	Stored Waste Examination Pilot Plant
TCLP	toxicity characteristic leaching procedure
TDOP	Ten-Drum Overpack
TLA	TRUPACT Loading Area
TPA	TRUPACT payload assemblage
TRU	transuranic
TRUPACT	Transuranic Package Transporter
TSA	Transuranic Storage Area
TSA-RE	Transuranic Storage Area-Retrieval Enclosure
TSCA	Toxic Substances Control Act
TSD	treatment, storage, and/or disposal
UBC	Uniform Building Code
UHC	underlying hazardous constituent
UL	Underwriters Laboratories
UM	uncategorized metal
UPS	uninterruptible power supply
U.S.	United States

U.S.C.	United States Code
UTS	universal treatment standards
V	volt
VOC	volatile organic compound
WAC	waste acceptance criteria
WAF	Waste Aggregation Facility
WAP	waste analysis plan
WCC	Warning Communications Center
WCRA	Waste Characterization and Repackaging Area
WG	waste group
WIPP	Waste Isolation Pilot Plant
WMF	Waste Management Facility
WSF	Waste Storage Facility
yr	year

## **MODULE I – STANDARD PERMIT CONDITIONS**

### **I.A EFFECT OF PERMIT**

The Permittee is authorized to manage mixed waste (MW) at the MW management units (MWMUs) in accordance with the conditions of this Permit and the applicable provisions of the Idaho Administrative Procedures Act (IDAPA) 58.01.05.000 et seq. [Title 40 of the Code of Federal Regulation (CFR) Part 260 et seq.]. Any management of hazardous waste (HW)/MW in the MWMUs that is not authorized by this Permit or by IDAPA 58.01.05.012 [40 CFR § 270.42(e)], and for which a permit is required under the Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA), Section 3005 of RCRA, is prohibited.

Pursuant to IDAPA 58.01.05.012 [40 CFR § 270.4], compliance with this Permit generally constitutes compliance, for purposes of enforcement, with the HWMA and the RCRA, except for the requirements not included in this Permit which become effective by statute or future regulatory changes including those requirements promulgated under IDAPA 58.01.05.011 [40 CFR Part 268], restricting the placement of HW in or on the land. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any violation of state or local law or regulations.

- I.A.1. The Department of Energy (DOE) is the owner and is responsible for activities which include policy, programmatic, funding and scheduling decisions, as well as overall management and operation of the facility.
- I.A.2. The DOE Designated Contractor, as operator, is responsible for the day-to-day operations of the assigned permitted units, and for all permitted activities related to the assigned units, for which the DOE Designated Contractor, its agents, employees, or subcontractors have operational control, including waste characterization and handling, monitoring, record keeping, reporting, and contingency planning.
- I.A.3. Generator treatment of operations-generated waste performed within the MWMUs is not subject to the requirements of this Permit as long as the waste is managed in accordance with IDAPA 58.01.05.006 [40 CFR § 262.34].
- I.A.4. Treatment of radioactive-only waste (ROW) that does not contain HW, as defined in Idaho Code 39-4403(8), performed within MWMUs is not subject to the requirements of this Permit.

### **I.B ENFORCEABILITY**

The terms and conditions of this Permit are enforceable pursuant to the HWMA or any other applicable federal, state, or local law. Violations of this Permit may result in civil penalties, in accordance with the HWMA [Idaho Code 39-4414] and the HWMA Civil Penalty Policy.

- 1.B.1. Any person who knowingly makes any false statement or representation in any application, label, manifest, record, report, permit, or other document filed, maintained or used, for the purposes of complying with the provisions of Idaho Code

§ 39-4415, shall be guilty of a misdemeanor and subject to the maximum daily fine allowed by law or to imprisonment not to exceed one (1) year, or to both, for each separate violation or for each day of a continuing violation.

I.C OTHER AUTHORITY

The Department expressly reserves any right of entry provided by law and any authority to order or perform emergency or other response activities as authorized by law.

I.D PERMIT ACTIONS

- I.D.1. This Permit may be modified, revoked and reissued, or terminated for cause, as specified in IDAPA 58.01.05.012 [40 CFR §§ 270.41, 270.42, or 270.43].
- I.D.2. The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any permit condition.
- I.D.3. The Director may modify this Permit when the standards or regulations on which the permit was based have been changed by statute, amended standards or regulations, or by judicial decision after the effective date of this Permit.
- I.D.4. Except for as provided by specific language in this Permit or except for the Director's approval of a class 1 or 2 permit modification, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.42(a) and (b)], any modifications which substantially alter the facility or its operation as covered by this Permit shall be administered as a class 3 permit modification prior to such change taking place, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.42(c)].
- I.D.5. Within forty-five (45) days of a permit modification being put into effect or approved, the Permittee shall provide clean copies of the relevant portions of the Permit and attachments to incorporate the change (if not already reflected/provided in the change pages submitted with the permit modification request), reprint the documents (as necessary), and submit them to the Director.
- I.D.6. The Permittee shall ensure that Attachment 9 is current, consistent with Permit Condition I.D.5.

I.E SEVERABILITY

- I.E.1. The provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. Invalidation of any statutory or regulatory provision which authorizes any condition of this Permit does not affect the validity of any other statutory or regulatory authority for said provision.
- I.E.2. In the event that a condition of this Permit is stayed for any reason, the Permittee shall continue to comply with the related applicable and relevant permitted standards



in IDAPA 58.01.05.008 [40 CFR Part 264] until final resolution of the stayed condition.

**I.F. DUTY TO COMPLY**

I.F.1 The Permittee shall comply with all conditions of this Permit except to the extent and for the duration such noncompliance is authorized by an emergency permit issued in accordance with IDAPA 58.01.05.012 [40 CFR § 270.61]. Any Permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of HWMA, and is grounds for: (a) enforcement action; (b) Permit termination; (c) revocation and reissuance of permit; (d) modification of the Permit; or (e) denial of a Permit renewal application as specified in IDAPA 58.01.05.012 [40 CFR § 270.30(a)].

I.F.2 Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under §§ 3007, 3008, 3013, or 7003 of RCRA [42 United States Code (U.S.C.) §§ 6927, 6928, 6934 and 6973], §§ 104, 106(a), or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [42 U.S.C. §§ 9604, 9606(a), or 9607, commonly known as CERCLA], as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), or any other state or federal law providing for protection of public health or the environment from any imminent and substantial endangerment to human health or the environment.

I.F.3 For purposes of compliance with Module VI of this Permit, the relevant sections of the Materials and Fuels Complex Combined Partial-Permit with an effective date of August 16, 2004 shall be incorporated, by reference, into this Permit and be enforceable as conditions of this Permit.

**I.G. DUTY TO REAPPLY**

If the Permittee wishes to continue an activity allowed by this Permit after the expiration date of this Permit, if the Permittee is required to conduct post-closure care, or if the Permittee is required to continue corrective action, the Permittee shall reapply a minimum of one-hundred-eighty (180) calendar days prior to the expiration date of this Permit, in accordance with IDAPA 58.01.05.012 [40 CFR §§ 270.10(h) and 270.30(b)].

**I.H. PARTIAL PERMIT EXPIRATION**

I.H.1. This Permit and all conditions shall automatically expire ten (10) years from the effective date unless continued in accordance with IDAPA 58.01.05.012 [40 CFR § 270.51]. If continued, this Permit and all conditions herein will remain in effect and enforceable until a final permit determination on the new permit application is reached.

I.H.2. The Permittee is required to continue this Permit for any period required to comply with the corrective action requirements of Module VI of this Permit. The corrective action obligations contained in this Permit shall continue regardless of whether the MWMUs continue to operate or ceases operation and closes.

I.I. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit as specified by IDAPA 58.01.05.012 [40 CFR § 270.30(c)].

I.J. DUTY TO MITIGATE

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment resulting from the noncompliance and shall carry out such measures, as are reasonable, to prevent significant adverse impacts on human health or the environment as specified by IDAPA 58.01.052.012 [40 CFR § 270.30(d)]. Such mitigation shall not be a defense to enforcement.

I.K. PROPER OPERATION AND MAINTENANCE

The Permittee shall, at all times, properly operate and maintain all facilities and controls (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit as specified by IDAPA 58.01.05.012 [40 CFR § 270.30(e)]. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures to include following standard operating procedures and training procedures. Standard operating procedures will be, at a minimum, reviewed and updated as needed by the Permittee. This provision requires the operation of back-up or auxiliary equipment or similar systems only when necessary to achieve compliance with the conditions of this Permit.

I.L. DUTY TO PROVIDE INFORMATION

The Permittee shall furnish to the Director, by the date specified by the Director, any relevant information the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit as specified by IDAPA 58.01.05.012 [40 CFR § 270.30(h)] . The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit.

I.M. INSPECTION AND ENTRY

Pursuant to IDAPA 58.01.05.012 [40 CFR § 270.30(i)], the Permittee shall allow the Department, the Director, and/or their authorized officers, employees, or representatives, upon the presentation of credentials and other documents, as may be required by law, to:

- I.M.1. Enter, at reasonable times, upon the Permittee's premises where a permitted facility or activity is located or conducted, or where records are kept as required by the conditions of this Permit;
- I.M.2. Have access to and copy, at reasonable times, any records that are kept as required by the conditions of this Permit;

I.M.3. Inspect, at reasonable times, any portion of the MWMUs, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and

I.M.4. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the HWMA or RCRA, any substances or parameters at a permitted facility.

I.N. MONITORING AND RECORDS

I.N.1. The Permittee shall retain copies of all reports required by this Permit, the certification required by IDAPA 58.01.05.008 [40 CFR § 264.73(b)(9)], and records of all data used to complete the application for this Permit for a period of at least three (3) years from the date of the report, record, or certification unless a longer retention period for certain information is required by other conditions of this Permit. These periods may be extended by request of the Director, at any time, upon written notification to the Permittee. The retention times are automatically extended during the course of any unresolved enforcement action regarding this Facility to three (3) years beyond the conclusion of the enforcement action.

I.N.2. Pursuant to IDAPA 58.01.05.012 [40 CFR § 270.30(j)(3)], records of monitoring information shall specify:

I.N.2.a. The date(s), exact place(s), and times of sampling or measurements;

I.N.2.b. The name(s), title(s), and affiliation(s) of the individual(s) who performed the sampling or measurements;

I.N.2.c. The date(s) analyses were performed;

I.N.2.d. The name(s), title(s), and affiliation(s) of the individual(s) who performed the analyses;

I.N.2.e. The analytical techniques or methods used; and

I.N.2.f. The results of such analyses, including the Quality Control/Quality Assurance summary.

I.N.3. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed shall be the appropriate method from IDAPA 58.01.05.005 [40 CFR Part 261, Appendix I] or an equivalent method approved by the Director. Laboratory methods shall be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846 (prevailing edition) (hereinafter referred to as SW-846), Standard Methods for the Examination of Water and Wastewater (prevailing edition), or other alternate methods approved in this Permit, or an equivalent method in accordance with Permit Condition I.N.4 of this Permit.

I.N.4. The Permittee may substitute analytical methods which are equivalent or superior to those specifically approved for use in this Permit, in accordance with the following:

I.N.4.a. The Permittee submits to the Director a request for substitution of analytical method(s) specifically approved for use in this Permit. The request shall provide information demonstrating that the proposed method(s) requested to be substituted are equivalent or superior in terms of sensitivity, accuracy, and precision (i.e., reproducibility); and,

I.N.4.b. The Permittee receives a written approval from the Director for the substitution of analytical method(s). Such approval shall not require a permit modification under IDAPA 58.01.05.012 [40 CFR § 270.42].

I.O. REPORTING PLANNED CHANGES

The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(1)].

I.P. REPORTING ANTICIPATED NONCOMPLIANCE

The Permittee shall give advance notice to the Director of any planned changes in a MWMU or activity which may result in noncompliance with requirements of this Permit in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(2)]. Advance notice shall not constitute a defense for any noncompliance, other than as provided under the Environmental Audit Protection Act and its implementing rules.

I.Q. CERTIFICATION OF CONSTRUCTION OR MODIFICATION

I.Q.1. The Permittee may not commence storage of HW/MW in a new permitted hazardous waste management unit (HWMU)/MWMU or in a modified portion of an existing permitted HWMU/MWMU except as provided in IDAPA 58.01.05.012 [40 CFR § 270.42], until the Permittee has submitted to the Director by certified mail, express mail, or hand delivery a letter, along with the attachments required under Permit Condition II.A.2, signed by the Permittee and a registered professional engineer certifying that the permitted unit(s) at the Facility have been constructed or modified in accordance with the approved plans and specifications in compliance with this Permit in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(2)]; and

I.Q.2. The Director has reviewed and inspected (if deemed appropriate) the modified or newly constructed unit(s) and has notified the Permittee in writing that the unit(s) were found in compliance with the conditions of this Permit; or

I.Q.3. If, within fifteen (15) calendar days after the date of submission of the letter in Permit Condition I.Q.1 of this Permit, the Permittee has not received notice from the Director of the intent to inspect, prior inspection is waived and the Permittee may commence storage of HW/MW in the permitted unit(s) certified in accordance with Permit Condition I.Q.1 of this Permit.

I.R. TRANSFER OF PERMIT

This Permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to IDAPA 58.01.05.012 [40 CFR § 270.40]. Prior to transferring ownership or operation of one or more of the MWMUs during the

operating life, the Permittee shall notify the new owner or operator, in writing, of the requirements of IDAPA 58.01.05.008, 58.01.05.011, and 58.01.05.012 [40 CFR Parts 264, 268 and 270] and this Permit.

I.S. TWENTY-FOUR (24) HOUR REPORTING

I.S.1. In accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(6)], the Permittee shall verbally report to the Director any noncompliance with this Permit which may endanger human health or the environment within twenty-four (24) hours from the time the Permittee becomes aware of such noncompliance, including:

I.S.1.a. Noncompliance with Permit Condition II.A.1 of this Permit; or

I.S.1.b. Information concerning a release of any HW/MW that may endanger public drinking water supplies; or

I.S.1.c Any release of a MW, HW, or HW constituents that results in the following:

I.S.1.c.(1) Concentrations at the WMF-676 boundary exceeding the General Population Exposure Limits specified in current, applicable, and relevant literary sources.

I.S.1.c.(2). Concentrations within the lower ventilation containment areas (e.g., Clean, Zone 1 area) exceeding the Workplace Time Weighted Average as listed in "NIOSH: Pocket Guide to Chemical Hazards," United States (U.S.) Department of Health and Human Services, Public Health Service Center for Disease Control, National Institute for Occupational Safety and Health, June 1990, or latest edition; or

I.S.1.d. A release or discharge of HW/MW, or of a fire or explosion at the MWMUs, which could threaten human health or the environment outside the facility.

I.S.2. The immediate (not later than 24-hours) verbal report shall include, but not be limited to, the following:

- Name, title, and telephone number of individual reporting;
- Name, address, and telephone number of the owner or operator;
- Name, address, and telephone number of the Facility;
- Date, time, and type of incident;
- Location and cause of the accident;
- Name and quantity of materials involved;
- The extent of injuries, if any;
- An assessment of actual or potential hazards to the environment and human health, where this is applicable;
- Description of any emergency action taken to minimize possible threat(s) to human health and the environment;
- Estimated quantity and disposition of recovered material that resulted from the incident; and
- Any other information necessary to evaluate the situation and to develop an appropriate course of action.

I.S.3. Within five (5) calendar days after the Permittee is required to provide verbal notification, as specified in Permit Conditions I.S.1 and I.S.2 of this Permit, the Permittee shall provide to the Director a written submission.

I.S.3.a. The written submission shall include, but not be limited to the following:

- Name, address, and telephone number of individual reporting;
- A description (including cause, location, extent of injuries, if any, and an assessment of actual or potential hazard(s) to the environment and human health outside the MWMUs where applicable) of the incident (noncompliance and/or release);
- The period(s) in which the incident (noncompliance and/or release) occurred (including exact dates and times);
- Whether the results of the incident remain a threat to human health and the environment (whether the noncompliance has been corrected and/or the release has been adequately remediated); and
- If the noncompliance has not been corrected, the anticipated time it is expected to continue; the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance, and/or steps taken or planned to adequately remediate the release.

I.S.3.b. The Permittee need not comply with the five (5) calendar day written notice requirement if the Director waives the requirement and the Permittee submits a written report within fifteen (15) calendar days from the time the Permittee is required to provide verbal notification, as specified in Permit Condition I.S.1 of this Permit.

#### I.T. OTHER NONCOMPLIANCE

The Permittee shall provide to the Director, on February 1st and August 1st of each calendar year, a report of all instances of noncompliance not otherwise required to be reported in accordance with Permit Condition I.S of this Permit. The noncompliance reports shall contain the information, as applicable, listed in Permit Condition I.S of this Permit, and shall be submitted in accordance with IDAPA 58.01.05.012 [40 CFR § 270.30(l)(10)] and Permit Condition I.X of this Permit. Reporting shall not constitute a defense for any noncompliance.

#### I.U. OTHER INFORMATION

Whenever the Permittee becomes aware that they failed to submit any relevant facts in the permit application or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director in accordance with Permit Conditions I.V and I.X of this Permit.

#### I.V. SIGNATORY REQUIREMENT

All applications, reports, or information requested by or submitted to the Director shall be signed and certified in accordance with IDAPA 58.01.05.012 [40 CFR §§ 270.11 and 270.30(k)].

I.W. CONFIDENTIAL INFORMATION

Pursuant to Title 9, Chapter 3, of the Idaho Code; IDAPA 58.01.05.012 [40 CFR § 270.12]; or any other applicable federal, state, or local law, the Permittee may assert a claim of confidentiality regarding any information required to be submitted pursuant to this Permit. The Department shall determine whether said information is exempt from disclosure pursuant to applicable law.

I.X. REPORTS, NOTIFICATION, AND SUBMISSIONS

All reports, notifications, or other submissions which are required by this Permit and IDAPA 58.01.05.012 [40 CFR § 270.30] shall be sent or given to the Director by certified mail, express mail, or hand delivered to:

Director or Hazardous Waste Program Manager  
Idaho Department of Environmental Quality  
Waste Management and Remediation Division  
1410 North Hilton Boise, Idaho 83706-1255  
Telephone No. (208) 373-0240

Twenty-four (24) hour telephone number (800) 632-8000

The address and telephone numbers listed above are current as of the effective date of this Permit and may be subject to change.

I.Y. DOCUMENTS TO BE MAINTAINED BY THE PERMITTEE(S)

I.Y.1. The Permittee shall maintain the documents specified in Permit Condition I.Y.1.a, I.Y.1.b, I.Y.1.c, I.Y.1.d, I.Y.1.e, and I.Y.1.f at the Radioactive Waste Management Complex (RWMC) for at least three (3) years. Documents so specified that are greater than three (3) years old, yet still required to demonstrate compliance with HWMA/RCRA, shall also be maintained at the RWMC. Those records greater than three (3) years old, but not still required to demonstrate compliance with HWMA/RCRA, may be maintained at an alternate location in a readily retrievable manner. Documents may be maintained solely using an electronic format, as long as the documents are readily retrievable to obtain a printed hard copy.

I.Y.1.a. A complete copy of this Permit, including Attachments and Tables.

I.Y.1.b. Unit Specific Waste Analysis Plan (WAP) as required by IDAPA 58.01.05.008 [40 CFR § 264.13] and this Permit;

I.Y.1.c. Operating Record, as required by IDAPA 58.01.05.008 [40 CFR § 264.73] and this Permit;

I.Y.1.d. Inspection Procedures – Schedules, Logs, and records as required by IDAPA 58.01.05.008 [40 CFR § 264.15] and this Permit;

I.Y.1.e. Unit Specific Contingency Plan as required by IDAPA 58.01.05.008 [40 CFR § 264.53(a)] and this Permit; and,

I.Y.1.f. Approved Unit Closure Plan as required by IDAPA 58.01.05.008 [40 CFR § 264.112(a)] and this Permit.

- I.Y.2. Personnel training documents and records, as required by IDAPA 58.01.05.008 [40 CFR § 264.16(d)] and this Permit, may be maintained at a records repository (e.g., central personnel office) for DOE and DOE contractor employees, provided the records are available for inspection by an authorized official.

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## MODULE II – GENERAL FACILITY CONDITIONS

### II.A. DESIGN AND OPERATION OF FACILITY

- II.A.1. The Permittee shall construct, maintain and operate the MWMUs in a manner that minimizes the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of MW or hazardous constituents to the air, soil, groundwater, or surface water which could threaten human health and/or the environment.
- II.A.2. The Permittee shall construct and/or maintain all MWMUs in accordance with the approved designs, specifications, and maintenance schedules that are included as Attachments 1 through 9 of this Permit. Any modifications to the approved designs, specifications, and maintenance schedules shall be completed pursuant to Permit Condition I.D.4. After completion of construction of each MWMU or a modified portion of an existing permitted HWMU/MWMU, the Permittee shall submit final record drawings and the narrative report to the Director as part of the construction certification documentation specified in Permit Condition I.Q.
- II.A.3. Minor deviations from the approved designs or specifications necessary to accommodate proper construction and the substitution of equivalent or superior materials or equipment shall be noted on the record drawings and the rationale for those deviations shall be provided in narrative form. Updated record drawings must be submitted to the Department within sixty (60) days of completion of construction or implementation of the substitution. Upon review of the as-built or record drawings and narrative report, if deemed necessary, the Department may require the Permittee to submit a permit modification in accordance with Permit Condition I.D.4.
- II.A.4. The Permittee is authorized to manage MW as specified in the Part A Permit Application included in Attachment 1 of this Permit and which meet the waste acceptance criteria (WAC) in Attachment 2 of this Permit, as modified per Permit Conditions II.D, II.E, II.F, and II.G and Modules III, IV, and V of this Permit.
- II.A.5. All MW shall be managed only in areas authorized for MW management under the conditions of this Permit.
- II.A.6. The Permittee shall expeditiously cease active management of waste material and related operations in all affected areas within WMF-676 or a containment enclosure where the process ventilation system or ancillary equipment controlling fugitive emissions ceases to be maintained under sufficient negative pressure/flow to control fugitive emissions. Waste handling necessary to allow safe system shut down is allowed as is on-going activity required by the permits to properly manage all waste containers present in building WMF-676 inventory or within the containment enclosure. The Permittee may operate at a reduced capacity in the affected area(s) if the ventilation system maintains a negative pressure/flow sufficient to control fugitive emissions. The Permittee shall meet all other requirements of this Permit while operating at a reduced capacity.
- II.A.7. Containment systems for all waste management operations shall be constructed, operated, and maintained to ensure no spilled waste migrates outside of the containment areas, as required by IDAPA 58.01.05.008 [40 CFR Part 264, Subpart I]. In particular, the following waste management operations must be within such containment areas:

- II.A.7.a. Storage of MW containers that contain free liquids;
- II.A.7.b. Treatment of MW; and
- II.A.7.c. Transport or movement of MW in open containers or devices, as specified in Table D-3 of Attachment 1.F.

II.B. RECEIPT OF OFF-SITE MIXED WASTE

- II.B.1. The Permittee shall not receive any MW from a foreign source.
- II.B.2. When the Permittee is to receive MW from an off-Site source (except where the Permittee is also the generator), he must inform the generator in writing that he has the appropriate permits and will accept the waste the generator is shipping. The Permittee must keep a copy of this written notice as part of the operating record, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.12(b)].
- II.B.3. All off-site waste must be received and verified at the WSF or SWEPP, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.13(a)(4)], as specified in Section C-2e of Attachment 2.
- II.B.4. The Permittee shall receive only DOE MW.

II.C. WASTE ANALYSIS PLAN

- II.C.1. The Permittee shall comply with the WAP for the MWMUs, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.13(b)], IDAPA 58.01.05.011 [40 CFR § 268.7], as described in Attachment 2 of this Permit and Permit Conditions II.C.2 through II.C.11 of this Permit.
- II.C.2. The Permittee shall verify the analysis of each newly generated waste stream as part of its quality assurance program, in accordance with Section C-2 of Attachment 2 of this Permit and SW-846, or equivalent methods approved by the Director. At a minimum, the Permittee shall maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations. If the Permittee uses a contract laboratory to perform analyses, then the Permittee shall inform the laboratory, in writing, that it must operate under the waste analysis conditions set forth in this Permit.
- II.C.3. The Permittee shall, for those existing waste inventories for which the contents are unknown; the content code is unknown; the applicable Environmental Protection Agency (EPA) Hazardous Waste Numbers (HWNs) are unknown; the assigned content code is zero (0); and those which are assigned the 000, 00A, or 00B designation comply with the applicable requirements of Attachment 2.
- II.C.4. The Permittee shall comply with the procedures included in Section C-3 of Attachment 2 of this Permit for wastes that are restricted from land disposal.

- II.C.5. The Permittee shall collect and analyze representative samples of waste in accordance with IDAPA 58.01.05.005 [40 CFR Part 261], 58.01.05.008 [40 CFR § 264.13(a)], IDAPA 58.01.05.011 [40 CFR § 268.7)], and Permit Condition I.N.3, as specified in Attachment 2 of this Permit.
- II.C.6. The Permittee shall allow independent sampling and sample splitting when requested by the Director. At the Permittee's request, the Director will inform the Permittee of all analyses to be performed on split samples.
- II.C.7. The Permittee shall comply with the sampling procedures, method requirements, quality control, equipment testing, inspection, maintenance, and equipment calibration and frequency standards for the procedures as specified in the Advanced Mixed Waste Treatment Project (AMWTP) Waste Characterization Quality Assurance Project Plan (QAPjP) located in Appendix XXI of this Permit, as modified per Permit Condition II.C of this Permit and Modules III and IV of this Permit. If the Permittee uses a contract laboratory to perform waste analysis, the Permittee shall notify the laboratory, in writing, of the waste analysis and quality assurance/quality control parameters required by this Permit.
- II.C.8. The Permittee shall use the methods for statistically selecting containers for visual examination, independent RTR review, analysis and/or reevaluation in accordance with the WAC of the facility receiving the waste for final disposal or SW-846 to ensure the accuracy of the RTR results and to verify the Process Knowledge for the waste, as specified in the AMWTP Waste Characterization QAPjP located in Appendix XXI of this Permit.
- II.C.8.a. The Permittee shall statistically reevaluate the accuracy of IDC and EPA HWN assignment based on the results of the verification performed in accordance with Permit Condition II.C.8.
- II.C.9. The Permittee shall review, validate, and verify all analytical data; reconcile analytical results with data quality objectives; satisfy data reporting requirements; and identify, document, and report all nonconformances as specified in the AMWTP Waste Characterization QAPjP located in Appendix XXI of this Permit.
- II.C.10. The Permittee may use Process Knowledge (i.e., Acceptable Knowledge) for characterization as specified in Attachment 2 of this Permit. Process Knowledge documentation shall be maintained in an auditable record and confirmed using visual examination, real time radiography (RTR), and/or headspace gas and solid waste sampling and analysis as specified in Attachment 2 of this Permit, as modified per Permit Condition II.C of this Permit and Modules III and IV of this Permit.
- II.C.10.a. The results of the confirmation procedures required in II.C.8 and II.C.10 shall be documented in the Operating Record.
- II.C.11. The Permittee shall characterize Special Case Waste (SCW) Glovebox System feeds in accordance with IDAPA 58.01.05.008 [40 CFR §§ 264.13(a) and 264.13(b)(1) through 13(b)(4)], Permit Condition I.N.3, and as follows:

- II.C.11.a. The Permittee shall sample 100% of SCW Glovebox System feed containers with unknown IDCs/Waste Groups (WGs) and/or unknown EPA HWNs in accordance with IDAPA 58.01.05.008 [40 CFR § 264.13(a)(1)].
- II.C.11.b. The Permittee shall, at a minimum, analyze SCW Glovebox System feed samples for the parameters specified in Table C-4 of Attachment 2 of this Permit.
- II.C.11.c. The Permittee shall statistically reevaluate the sampling frequency for SCW Glovebox System waste feeds semiannually. Sampling frequency shall be reevaluated for each IDC by the methods specified in the Section C-2d of Attachment 2 of this Permit.
- II.C.11.d. The Permittee shall statistically reevaluate the accuracy of IDC and EPA HWN assignment based on sampling conducted in Permit Condition II.C.11.a, as specified in the AMWTP Waste Characterization QAPjP located in Appendix XXI of this Permit.

II.D. WASTE ACCEPTANCE CRITERIA

The Permittee shall only accept MW with those EPA HWNs listed in the Part A Permit Application included in Attachment 1 of this Permit and that also meets the requirements specified in Attachment 2 of this Permit, as modified per Permit Conditions II.C, II.D, II.E, and II.G and Modules III and IV.

II.E. GENERAL WASTE ACCEPTANCE CRITERIA FOR EXISTING INVENTORIES AND AMWTP NEWLY-GENERATED WASTE

- II.E.1. The Permittee shall not accept existing or AMWTP newly-generated MW at the MWMUs that does not meet the general WAC for existing and AMWTP newly-generated waste for that MWMU or is otherwise prohibited, as specified in Attachment 2 of this Permit.
  - II.E.1.a. Only waste from another AMWTP MWMU may be accepted at WMF-676.
  - II.E.1.b. Waste containers may be transferred to SWEPP or the WSF if all the WAC are not met, upon concurrence of the Environmental Manager. The Environmental Manager must document in the operating record the reason(s) a container that did not meet the MWMU WAC was accepted.
- II.E.2. The Permittee shall not accept existing or AMWTP newly-generated MW at the MWMUs until data verifying compliance with Permit Condition II.E.1 have been entered into the Operating Record, as specified in Attachment 2 of this Permit.
- II.E.3. The Permittee shall not accept existing or newly-generated MW at the MWMUs if the container does not have a unique barcode on the container that is linked to the appropriate waste stream information and container-specific information maintained within the Operating Record, as specified in Attachments 1.A and 2 of this Permit.
- II.E.4. The Permittee shall not accept existing MW at WMF-676 with unknown IDCs/WGs and/or unknown EPA HWNs until containers have undergone RTR and drums have undergone headspace sampling and analysis, results of the analysis have been

entered into the Operating Record, and the waste meets all other applicable WAC, as specified in Attachment 2 of this Permit.

II.F. GENERAL WASTE ACCEPTANCE CRITERIA FOR OFF-SITE AND NON-AMWTP NEWLY-GENERATED ON-SITE WASTE

- II.F.1. The Permittee shall not accept off-Site or non-AMWTP newly-generated on-site MW at the MWMUs that does not meet the general WAC for off-Site and non-AMWTP newly-generated on-Site waste for the MWMU or is otherwise prohibited, as specified in Attachment 2 of this Permit.
- II.F.2. The Permittee shall not accept off-Site or non-AMWTP newly-generated on-Site MW at the MWMUs until data verifying compliance with Permit Condition II.F.1 have been entered into the Operating Record in accordance with Attachment 2 of this Permit.
- II.F.3. The Permittee shall not accept off-Site or non-AMWTP newly-generated on-Site MW at the MWMUs if the container does not contain a unique barcode, as specified in Attachments 1.A and 2 of this Permit
- II.F.4. The Permittee shall not accept off-site or non-AMWTP newly-generated on-site MW that does not have an identified disposal route, as specified in Attachment 2.

II.G. WMF-676 UNIT-SPECIFIC WASTE ACCEPTANCE CRITERIA

- II.G.1. The Permittee shall comply with the applicable unit-specific WAC for the Box Lines, Drum Repack System, SCW Glovebox System, and Supercompactor Unit, in addition to the general WAC specified in Attachment 2 of this Permit.
- II.G.1.a. The Permittee must not accept any container whose condition would impair the ability of the Permittee to safely manage the container during treatment.
- II.G.2. The Permittee shall update the Operating Record with all analytical results obtained from samples collected in the Box Lines, Drum Repack System, and SCW Glovebox System, as specified in Attachment 2 of this Permit. Data must be entered into the Operating Record before the waste represented by the sample is accepted into the Supercompactor Unit.
- II.G.3. The Permittee shall not accept MW with unknown IDCs/WGs and/or unknown EPA HWNs in the Supercompactor Unit.

II.H. SECURITY

The Permittee shall comply with the Security Provisions of IDAPA 58.01.05.008 [40 CFR § 264.14] and in Attachment 3 of this Permit, for the MWMUs.

- II.H.1. The Permittee shall prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of the facility, as required by IDAPA 58.01.05.008 [40 CFR § 264.14(a)].

II.I. INSPECTION PLAN

- II.I.1. The Permittee shall maintain the Inspection Schedules and Logs, in accordance with Permit Condition I.Y.
- II.I.2. The Permittee shall comply with the Inspection Schedules and Logs, for the MWMUs, in accordance with Attachment 4 of this Permit, and as follows;
- II.I.2.a. AMWTP personnel will conduct weekly inspections in all WSF and SWEPP container storage areas where waste is managed. Weekly inspections will consist of walking through the aisles separating the rows of containers looking for signs of container leaks and deterioration, as well as the condition of the pallets or risers;
- II.I.2.b. The Permittee shall inspect the container storage areas in WMF-676 in accordance with IDAPA 58.01.05.008 [40 CFR § 264.174] for the parameters and at the frequencies specified in Table F-5 of Attachment 4 of this Permit; and,
- II.I.2.c. All treatment areas shall be inspected daily, when in use, for spilled or leaking containers.
- II.I.3. The Permittee shall inspect the MWMUs to prevent malfunctions and deterioration, operator errors, and discharges that may either cause or lead to; (1) the release of HW, HW constituents, MW, and/or MW constituents to the environment; or (2) a threat to human health.
- II.I.4. The Permittee shall remedy, as required by IDAPA 58.01.05.008 [40 CFR § 264.15(c)], any deterioration or malfunction discovered by an inspection.
- II.I.5. The Permittee shall retain the Inspection Logs and Inspection Log Sheets required by Permit Conditions I.Y.1.d and II.I.1 of this Permit for at least three (3) years from the date of the inspection, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.73(b)(5)].
- II.I.6. The Permittee shall record on the Inspection Logs and Inspection Log Sheets, required by Permit Condition II.I.1 of this Permit, at a minimum, the following information:
- The date and time of the inspection,
  - The name and title of the inspector,
  - A notation of the observations made, and
  - The date and nature of any repairs or other remedial actions.
- II.J. PERSONNEL TRAINING
- II.J.1. The Permittee shall comply with the Training Plan, as included in Attachment 5 of this Permit, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.16], for each MWMU until that MWMU is fully closed and certification of closure has been received and approved by the DEQ.
- II.J.2. The Permittee shall ensure that, at a minimum, personnel are trained to effectively respond to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.16(a)(3)].

- II.J.2.a. The training must be successfully completed within six (6) months after the effective date of employment or appointment to new position and the personnel must attend an annual review of the initial training, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.16]
- II.J.3. The Permittee shall ensure that all personnel who handle HW/MW are trained in HW/MW management, safety, and emergency procedures, as applicable to their job description as it is described in this Permit in accordance with the Training Plan, included as Attachment 5 of this Permit.
- II.J.4. Personnel training documents and records, as specified in Attachment 5 and this Permit, shall be maintained by the Permittee at a designated location on the Facility in accordance with IDAPA 58.01.05.008 [40 CFR § 264.16(e)] and Permit Condition I.Y.2.
- II.J.4.a. Training records on current personnel must be kept until closure of the facility, and
- II.J.4.b. Training records on former employees must be kept for at least three (3) years from the date the employee last worked at the facility.
- II.K. PREPAREDNESS AND PREVENTION
- II.K.1. The Permittee shall operate each MWMU so as to minimize the possibility of a fire, explosion, or sudden/non-sudden release to the air or soil which could threaten human health or the environment, in accordance with Attachment 6 of this Permit.
- II.K.2. The Permittee shall, at a minimum, perform preventative maintenance and repair of the MWMUs emergency equipment, safety devices, and miscellaneous equipment included in the attachments of this Permit in accordance with the manufacturer's specifications or as determined by the AMWTP Maintenance Analysis Program to assure its proper operation in time of emergency. The Permittee shall maintain records and schedules of these preventative maintenance and repair activities on this equipment and safety devices, reflecting minimum and planned performance of these preventative maintenance activities, in the operating record in accordance with Permit Condition I.Y.1.
- II.K.3. The Permittee shall maintain access to the communications and alarm systems in accordance with IDAPA 58.01.05.008 [40 CFR § 264.34].
- II.K.4. The Permittee shall maintain arrangements with state and local authorities, as required by IDAPA 58.01.05.008 [40 CFR § 264.37]. If state or local officials refuse to enter into preparedness and prevention arrangements with the Permittee for a given MWMU, the Permittee must document this refusal in the operating record for the excluded unit.
- II.K.5. The Permittee shall maintain the aisle width/space necessary to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment. The aisle space requirements for each MWMU authorized to manage MW is specified in Module III of this Permit.

- II.K.6. The Permittee shall ensure all storage and treatment area secondary containment systems are inspected and maintained such that they are free of cracks, gaps, loss of integrity and corrosion and are impervious to leaks, spills, and accumulation of precipitation.
- II.K.7. The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste in accordance with IDAPA 58.01.05.008 [40 CFR § 264.17(a) and (b)], IDAPA 58.01.05.012 [40 CFR § 270.14(b)(9)], Permit Condition III.J, and Attachment 6 of this Permit.
- II.K.7.a. The Permittee must document compliance with IDAPA 58.01.05.008 [40 CFR § 264.17 (a) and (b)] when applicable, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.17(c)].
- II.L. CONTINGENCY PLAN
- II.L.1. The Permittee shall comply with the contingency plan for the MWMUs as included in Attachment 7 of this Permit, in accordance with IDAPA 58.01.05.008 [40 CFR Part 264, Subpart D].
- II.L.2. The Permittee shall review and amend, as necessary, the Contingency Plan, within fourteen (14) calendar days of the following events:
  - II.L.2.a. This Permit is revised;
  - II.L.2.b. The plan fails in an emergency;
  - II.L.2.c. The Permittee changes the Facility design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of HW/MW or HW/MW constituents, or changes the response necessary in an emergency;
  - II.L.2.d. The list of emergency coordinators changes; or
  - II.L.2.e. The list of emergency equipment changes.
- II.L.3. The Permittee shall submit a copy of the contingency plan and all revisions to the plan, to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.53(b)].
- II.L.4. The Permittee shall ensure that a trained Emergency Coordinator, or equivalent, is on the facility premises or on call (i.e. available to respond to an emergency by reaching the facility within a short period of time) in case of an emergency as required by IDAPA 58.01.05.008 [40 CFR § 264.55].
- II.L.5. The Permittee shall document in the Operating Record, the time, date, and details of any incident that requires implementing the Contingency Plan. Within fifteen (15) days after the incident, the Permittee shall submit a written report on the incident to the Director. Such a report shall include, at a minimum, all items specified in Permit Condition I.S.2.



II.M. MANIFEST SYSTEM

The Permittee shall comply with the manifest requirements of IDAPA 58.01.05.008 [40 CFR §§ 264.71, 264.72, and 264.76].

II.N. RECORDKEEPING AND REPORTING

In addition to the recordkeeping and reporting requirements specified elsewhere in this Permit, the Permittee shall comply with all applicable notification, certification, and record keeping regulations described in IDAPA 58.01.05.011 [40 CFR § 268.7] and the following:

- II.N.1. The Permittee shall maintain a written Operating Record, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.73(a)], for all records identified in IDAPA 58.01.05.008 [40 CFR § 264.73(b)(1) through (b)(17)]. The Operating Record shall be maintained in accordance with Permit Condition I.Y.1.
- II.N.2. The Permittee shall, by March 1st of each year, submit to the Director a certification pursuant to IDAPA 58.01.05.008 [40 CFR § 264.73(b)(9)] identifying that the Permittee has a program in place to reduce the volume and toxicity of MW and HW generated to the degree determined to be economically practicable and the proposed method of treatment, storage, or disposal that is most currently available to the Permittee that minimizes the present and future threat to human health and the environment. The Permittee shall maintain each certification of waste minimization in the Operating Record in accordance with Permit Condition II.N.
- II.N.3. The Permittee shall, by March 1st of each even-numbered year, submit to the Director a biennial report covering the Advanced Mixed Waste Treatment Project (AMWTP) activities pursuant to IDAPA 58.01.05.008 [40 CFR § 264.75(a) through (j)].
- II.N.4. The Permittee shall conduct and complete a source reduction evaluation review and written plan, in accordance with the procedures and format provided in the "EPA Waste Minimization Opportunity Assessment Manual" (EPA/625/7-88/003). The review and plan shall be submitted to the Director by March 31st, 2011 and every four years thereafter and include, at a minimum, the following general operating and reporting requirements.
  - II.N.4.a. The Permittee shall submit to the Director detailed descriptions of any programs the Permittee may have to assist generators of HW/MW in reducing the volume (quantity) and toxicity of wastes produced.
  - II.N.4.b. The Permittee shall submit the following information to the Director, and shall submit revisions or changes to the Director within thirty (30) calendar days of those revisions or changes:
    - II.N.4.b.(1). A list of generators who received information from the Permittee according to Permit Condition II.N.4.a of this Permit.
    - II.N.4.b.(2). A list of generators who used the Permittee's contractor services on a waste minimization program.

II.N.4.b.(3). A list of generators known to the Permittee who have a waste minimization program in place and any known results (i.e., has there been a reduction in wastes submitted for treatment, recycling or disposal).

II.N.5. All reports, notifications, applications, or other materials required to be submitted to the Director shall be submitted in accordance with Permit Condition I.X of this Permit.

## II.O. COMPLIANCE SCHEDULE

II.O.1. The Permittee shall comply with the applicable waste analysis requirements of Attachment 2 of this Permit for those CH existing waste inventories for which one or more of the following apply: the contents are unknown; the item description code (IDC) is unknown; the applicable EPA HWNs are unknown; the assigned IDC is zero; and/or those which are assigned the 000, 00A, or 00B designation, in accordance with the schedules established in Permit Conditions II.O.1.a and II.O.1.b of this Permit. The schedules set forth in Permit Conditions II.O.1.a and II.O.1.b of this Permit set forth interim requirements and projected completion dates for their achievement, in accordance with IDAPA 58.01.05.012 [40 CFR § 270.33(a)(2)], as follows:

II.O.1.a. The Permittee shall, for each container of MW transferred into the Waste Storage Facility (WSF), comply with the waste analysis requirements specified in Attachment 2 of this Permit within sixty (60) months or less for existing inventories and twenty-four (24) months or less for newly-generated waste.

II.O.1.b. The Permittee may, for a group of MW containers, comply with the waste analysis requirements specified in Attachment 2 of this Permit on a case-by-case basis, as follows. First, it must be demonstrated that each container within the group is representative of the same waste stream. Second, it must be demonstrated that a subset of the group can be randomly selected which will provide a representative sample of the larger group. Then the procedures specified in Attachment 2 of this Permit may be performed for the subset of containers and the resulting waste analysis information may be applied to each container within the larger group. If the Permittee chooses to apply this Permit Condition, then a detailed plan, which describes how the requirements of this Permit Condition will be met, shall be submitted to the Director, for approval prior to use. The timing requirement specified in Permit Condition II.O.1.a shall be applicable to each container in the group, unless a modified schedule consistent with the requirements of IDAPA 58.01.05.012 [40 CFR § 270.33] is included with and approved as part of the plan.

II.O.2. The Permittee shall, for each MW container that is subject to Permit Condition II.O.1 of this Permit, enter into the facility operating record the container identification number and the date the container was originally placed into the WSF.

II.O.3. The Permittee shall verify through RTR or VE that solidified sludge containers containing waste from the halogenated organic, acid, or oxidizer reactivity group, as defined in the "Chemical Compatibility Evaluation of Wastes for the Advanced Mixed Waste Treatment Project" (RPT-ESH-014), do not contain free liquids, in accordance with the schedule established in Permit Conditions II.O.3.a of this permit. Alternatively, solidified sludge containers with halogenated organic waste may be separated or physically segregated from containers with waste from the acids and oxidizers reactivity groups and solidified sludge containers with waste from the acids

or oxidizers reactivity groups may be separated or physically segregated from halogenated organic waste until the absence of liquid within the containers has been verified through RTR or VE.

- II.O.3.a. The Permittee shall verify that potentially incompatible solidified sludge waste containers from the halogenated organic, acid, or oxidizer reactivity groups, as defined in the "Chemical Compatibility Evaluation of Wastes for the Advanced Mixed Waste Treatment Project" (RPT-ESH-014), do not contain free liquids within thirty-six (36) months after the effective date of this permit or within twenty-four (24) months from the date of retrieval, if retrieved after the effective date of the permit.
- II.O.4. Given that the amount of breached containers is equal to or less than five (5) percent (%) of the waste retrieved from the Transuranic Storage Area (TSA) Pads 1, 2, and R, the Permittee shall meet the following schedule for the retrieval of waste containers from the TSA Pads 1, 2, and R. It is estimated that 53,300 cubic meters of waste is located on TSA Pads 1, 2, and R. This retrieval schedule addresses the Notice of Noncompliance (NON), Observation Number 9, from the Director of the Hazardous Waste Division, EPA Region X, concerning alleged RCRA violations of IDAPA 58.01.05.009 [40 CFR §§ 265.15 and 265.35]. If greater than 5% of the waste containers retrieved are breached, then the Permittee shall notify the Director as part of the semiannual report in accordance with Permit Condition I.T.
- By December 31, 2010 the Permittee shall have retrieved 50% of the estimated waste on TSA Pads 1, 2, and R.
  - By December 31, 2018 the Permittee shall have retrieved 100% of the estimated waste on TSA Pads 1, 2, and R.
- II.P. CLOSURE
- II.P.1. The Permittee shall meet the general closure performance standard as specified in IDAPA 58.01.05.008 [40 CFR § 264.111] during closure of the MWMUs subject to the terms of this Permit. Compliance with IDAPA 58.01.05.008 [40 CFR § 264.111] shall require closure of the MWMUs, in accordance with Attachments 8, 8.A, 8.B, 8.C, 8.D, and 8.E of this Permit.
- II.P.2. For the MWMUs, subject to the terms of this Permit, minor deviations from the permitted closure procedures necessary to accommodate proper closure shall be described in a narrative form with the closure certification statements. The Permittee shall describe the rationale for implementing minor changes as part of this narrative report. Within sixty (60) calendar days after completion of closure of the MWMUs the Permittee shall submit the closure certification statements and narrative report to the Director.
- II.P.3. The Permittee shall perform a hazardous waste determination on all solid waste generated during closure including, but not limited to, contaminated process equipment, building components, tanks and ancillary equipment, scrap metal, etc., in accordance with IDAPA 58.01.05.006 [40 CFR § 262.11] and Attachment 2 of this Permit.
- II.P.4. Partial closure of individual MWMUs is not authorized without a permit modification, in accordance with Permit Condition I.D.4.

- II.P.5. The Permittee shall amend the Closure Plan, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.112(c)], whenever necessary.
- II.P.6. The Permittee shall decontaminate or dispose of all MWMU equipment, structures, and soils, as required by IDAPA 58.01.05.008 [40 CFR § 264.114] and the Closure Plan, included as Attachments 8, 8.A, 8.B, 8.C, 8.D, and 8.E of this Permit.
- II.P.7. The Permittee shall provide to the Department a Notification of Closure, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.112(d)], at least sixty (60) calendar days prior to the date closure is expected to begin.
- II.P.8. After the Notification of Closure, the Permittee shall provide the Department with reasonably available results of previous analyses of soil samples from WMF-676, if such results are requested by the Department.
- II.P.9. The Permittee shall commence closure of the MWMUs, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.133(a)], no later than ninety (90) calendar days after the mission of the AMWTP is completed, as specified in Attachment 8.
- II.P.10. The Permittee shall close all waste management areas within one-hundred-eighty (180) calendar days of the date the Permittee completes the mission of the AMWTP, as specified in Attachment 8.
- II.P.11. The Permittee shall provide a certification statement that the MWMUs have been closed in accordance with this Permit, consistent with the requirements of IDAPA 58.01.05.008 [40 CFR § 264.115].
- II.Q. EQUIVALENT MATERIALS/INFORMATION
- II.Q.1. If certain equipment, materials, and administrative information (such as names, phone numbers, and addresses) are specified in this Permit, the Permittee may use an equivalent or superior substitute. Use of such equivalent or superior items shall not be considered a modification of the Permit; however, the Permittee must place documentation of the substitution, accompanied by a narrative explanation and the date the substitution became effective, in the Operating Record prior to or within seven (7) days of putting the substitution into effect, and submit documentation of the substitution to the Department as part of a permit modification in accordance with Permit Condition I.D.4 or as part of the construction certification documentation in accordance with Permit Conditions I.Q and II.A.2. Upon review of the documentation of the substitution, if deemed necessary, the Department may require the Permittee to submit a permit modification in accordance with Permit Condition I.D.4. The format of tables, forms, and figures are not subject to the requirements of this Permit and may be revised at the Permittee's discretion.
- II.Q.1.a. The Permittee shall provide to the Director, on February 1st and August 1st of each calendar year, documentation of all substitutions that were not otherwise included in a permit modification request or as part of construction certification documentation.
- II.Q.2. If the Department determines that the substitution was not equivalent to the original, it will notify the Permittee that the Permittee's claim of equivalency has been denied, of the reasons for the denial, and that the original material or equipment must be used. If the product substitution is denied, the Permittee shall comply with the

original approved product specification, find an acceptable substitution, or apply for a permit modification in accordance with Permit Condition I.D.4.

## II.R. CLOSURE COST ESTIMATE AND FINANCIAL ASSURANCE

The Permittee, as a Federal Facility, is exempt from the closure cost estimate and financial assurance requirements, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.140(c)].

## II.S. LIABILITY REQUIREMENTS

The Permittee, as a Federal Facility, is exempt for the liability coverage for sudden and accidental occurrence requirements, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.140(c)].

## II.T. ORGANIC EMISSIONS

Prior to installing or using any process vents or equipment subject to the requirements of IDAPA 58.01.05.008 [40 CFR § 264 Subparts AA and BB], the Permittee shall supply the specific Part B information required pursuant to IDAPA 58.01.05.012 [40 CFR § 270.24 and § 270.25] and shall obtain a permit modification in accordance with Permit Condition I.D.4.

## II.U. ORGANIC EMISSIONS STANDARDS

The Permittee shall not store or treat hazardous only wastes as defined by IDAPA 58.01.05.008 [40 CFR § 264.1080(b)(6)]. The Permittee's storage or treatment of only MW shall be documented through compliance with Permit Conditions I.N, II.B, and II.C.

## II.V. LAND DISPOSAL RESTRICTIONS

The Permittee shall comply with all applicable Land Disposal Restriction (LDR) requirements set forth in IDAPA 58.01.05.011 [40 CFR Part 268] for all non-WIPP destined waste and/or the Idaho National Laboratory (INL) Site Treatment Plan (STP) (published October 31, 1995), as applicable and amended.

### MODULE III – CONTAINER STORAGE AND TREATMENT

#### I.A. PERMITTED CONTAINER STORAGE AREAS

Subject to the terms of this Permit, the Permittee may store MW specified in Permit Condition III.B of this Permit in the following MW container storage areas.

- I.A.1. The WSF is located at the RWMC and is operated by the DOE Designated Contractor. The WSF will consist of up to eleven (11) buildings (modules) authorized to store up to 20,286,579 gallons of MW in containers. One (1) Type I module and seven (7) Type II Modules currently exist, and up to three (3) additional Type II Modules may be constructed in accordance with this Permit. Secondary containment will be provided, when necessary, by a sealed reinforced concrete floor with a 6" by 6" curb surrounding the storage area or by spill pallets or equivalent. See Attachments 1.A, 1.B, 1.C, 1.D, and 1.E of this Permit for a summary of secondary containment calculations.

##### I.A.1.a.

Type I Module		BUILDING #	WMF-635
PROCESS CODES:		S01 T04	
Description:	<p>The pre-engineered structural steel Type I Module is approximately 254 feet by 160 feet. WMF-635 is utilized for container venting, payload assembly, aspiration, gas generation testing, and storage. WMF-635 is divided into three rooms: the main storage area (MSA) with a storage capacity of 160,850 gallons, the Payload Assembly and Aspiration Area/ Waste Characterization and Repackaging Area (PAAA/WCRA) with a storage capacity of 494,039 gallons, and the TRUPACT Loading Area (TLA) with a storage capacity of 13,090 gallons. The Drum Venting Facility (DVF) is located in the southwest corner of the MSA. The Permittee may perform absorption, decanting, neutralization, repackaging, sizing and mechanical vibration within containment enclosures and mechanical vibration and macroencapsulation outside of the containment enclosures.</p> <p>Primary containment is provided by the waste containers and secondary containment is provided in areas where free liquids are stored by a sealed reinforced concrete floor with a 6 inch by 6 inch curb surrounding the storage area. The maximum primary containment liquid waste volume is 170,471 gallons with a corresponding secondary containment capacity of 78,207 gallons.</p>		
Capacity:	<p>Container Storage: 667,979 Gallons Container Treatment (except Macroencapsulation): 21,120 Gallons/Day Container Treatment (Macroencapsulation): 5,280 Gallons/Day</p>		
Notes:	<p>Treatment capacities are the total throughput rate allowed for all of the WSF and SWEPP.</p> <p>No single treatment process may be performed such that the design capacity for that process exceeds 7,040 gallons/day.</p> <p>The macroencapsulation treatment process design capacity is based on an average daily processing rate for a twelve (12) month rolling period.</p>		

I.A.1.b.

Type II Modules (except WMF-628 and WMF-634)		BUILDING #	WMF-629 – WMF-633						
PROCESS CODES:		S01 T04							
Description:	<p>The Type II Modules are pre-engineered structural steel buildings that rest on concrete foundations with sealed concrete floors. The Type II Modules are allowed for the visual examination of waste; the repackaging of waste; the absorption, decanting, and neutralization of liquids; the sizing of waste; the mechanical vibration of waste; macroencapsulation of waste; and storage of containers. All treatment activities except mechanical vibration of waste and macroencapsulation of waste must be performed in a containment enclosure.</p> <p>Primary containment is provided by the waste containers and secondary containment is provided in areas where free liquids are stored by a sealed reinforced concrete floor with a 6 inch by 6 inch curb surrounding the storage area. The maximum primary containment liquid waste volume is 561,596 gallons with a corresponding secondary containment capacity of 82,907 gallons.</p>								
Capacity:	<table><tr><td>Container Storage in each Module:</td><td>2,159,985 Gallons</td></tr><tr><td>Container Treatment (except Macroencapsulation):</td><td>21,120 Gallons/Day</td></tr><tr><td>Container Treatment (Macroencapsulation):</td><td>5,280 Gallons/Day</td></tr></table>			Container Storage in each Module:	2,159,985 Gallons	Container Treatment (except Macroencapsulation):	21,120 Gallons/Day	Container Treatment (Macroencapsulation):	5,280 Gallons/Day
Container Storage in each Module:	2,159,985 Gallons								
Container Treatment (except Macroencapsulation):	21,120 Gallons/Day								
Container Treatment (Macroencapsulation):	5,280 Gallons/Day								
Notes:	<p>Treatment capacities are the total throughput rate allowed for all of the WSF and SWEPP.</p> <p>No single treatment process may be performed such that the design capacity for that process exceeds 7,040 gallons/day.</p> <p>The macroencapsulation treatment process design capacity is based on an average daily processing rate for a twelve (12) month rolling period.</p>								

I.A.1.c.

Waste Characterization Facility		BUILDING #	WMF-634
PROCESS CODES:		S01 T04	
Description:	<p>WMF-634 is a Type II Module that is utilized for container storage and treatment as well as waste characterization. WMF-634 accommodates various characterization equipment, associated control rooms, and a drum coring room with vestibule. WMF-634 also allows for the visual examination of waste; the repackaging of waste; the absorption, decanting, and neutralization of liquids; the sizing of waste; the mechanical vibration of waste; macroencapsulation of waste; and storage of containers. All treatment activities except mechanical vibration of waste and macroencapsulation of waste must be performed in a containment enclosure.</p> <p>Primary containment is provided by the waste containers and secondary containment is provided in areas where free liquids are stored by a sealed reinforced concrete floor with a 6 inch by 6 inch curb surrounding the storage area. The maximum primary containment liquid waste volume is 320,172 gallons with a corresponding secondary containment capacity of 72,541 gallons.</p>		
Capacity:	<p>Container Storage: 1,231,430 Gallons Container Treatment (except Macroencapsulation): 21,120 Gallons/Day Container Treatment (Macroencapsulation): 5,280 Gallons/Day</p>		
Notes:	<p>Treatment capacities are the total throughput rate allowed for all of the WSF and SWEPP.</p> <p>No single treatment process may be performed such that the design capacity for that process exceeds 7,040 gallons/day.</p> <p>The macroencapsulation treatment process design capacity is based on an average daily processing rate for a twelve (12) month rolling period.</p>		



I.A.1.d.

WMF-628 Characterization Facility		BUILDING #	WMF-628
PROCESS CODES:		S01 T04	
Description:	<p>WMF-628 is a Type II Module that is utilized for container storage and treatment as well as waste characterization. Up to six mobile characterization units may be locating in WMF-628 that may perform RTR, gamma spectroscopy assay, PAN assay, and/or visual examination. Additionally, portable headspace gas sampling units and gas generation testing units may be located within WMF-628. WMF-628 also allows for the repackaging of waste; the absorption, decanting, and neutralization of liquids; the sizing of waste; the mechanical vibration of waste; macroencapsulation of waste; and storage of containers. All treatment activities except mechanical vibration of waste and macroencapsulation of waste must be performed in a containment enclosure.</p> <p>Primary containment is provided by the waste containers and secondary containment is provided in areas where free liquids are stored by a sealed reinforced concrete floor with a 6 inch by 6 inch curb surrounding the storage area. The maximum primary containment liquid waste volume is 287,896 gallons with a corresponding secondary containment capacity of 77,206 gallons.</p>		
Capacity:	<p>Container Storage: 1,107,290 Gallons Container Treatment (except Macroencapsulation): 21,120 Gallons/Day Container Treatment (Macroencapsulation): 5,280 Gallons/Day</p>		
Notes:	<p>Treatment capacities are the total throughput rate allowed for all of the WSF and SWEPP.</p> <p>No single treatment process may be performed such that the design capacity for that process exceeds 7,040 gallons/day.</p> <p>The macroencapsulation treatment process design capacity is based on an average daily processing rate for a 12 month rolling period.</p>		

I.A.2.

Stored Waste Examination Pilot Plant (SWEPP)		BUILDING #	WMF-610
PROCESS CODES:		S01 T04	
Description:	<p>The SWEPP is a two story building located at the RWMC and is operated by the DOE Designated Contractor. One location within the SWEPP building has been designated as a HWMA/RCRA regulated container storage area and is called the SWEPP storage area (SSA), which is located in the High Bay area on the first floor. The SSA is allowed for visual examination of waste; repackaging of waste; the absorption, decanting, and neutralization of liquids; the sizing of waste; the mechanical vibration of waste; macroencapsulation of waste; and storage of containers. All treatment activities except mechanical vibration of waste and macroencapsulation of waste must be performed in a containment enclosure. SWEPP also contains three assay units and an RTR unit and up to two mobile units (RTR and/or assay) mounted on trailers may be installed in the loading/unloading areas in the north and south ends of the building.</p> <p>Primary containment is provided by the waste containers and secondary containment is provided in areas where free liquids are stored by a sealed reinforced concrete floor with a 6 inch by 6 inch curb surrounding the storage area, except for the access ramp which is 3.5 inches high. Secondary containment may also be provided by spill pallets, or equivalent. The maximum primary containment liquid waste volume is 28,380 gallons with a corresponding secondary containment capacity of 3,294 gallons.</p>		
Capacity:	<p>Container Storage: 28,380 Gallons Container Treatment (except Macroencapsulation): 21,120 Gallons/Day Container Treatment (Macroencapsulation): 5,280 Gallons/Day</p>		
Notes:	<p>Treatment capacities are the total throughput rate allowed for all of the WSF and SWEPP.</p> <p>No single treatment process may be performed such that the design capacity for that process exceeds 7,040 gallons/day.</p> <p>The macroencapsulation treatment process design capacity is based on an average daily processing rate for a 12 month rolling period.</p>		

III.A.3.

Treatment Facility		BUILDING #	WMF-676
PROCESS CODES:		S01 T04	
Description:	<p>The treatment facility (WMF-676) is located at the RWMC and is operated by the DOE Designated Contractor. WMF-676 is a two-story industrial structure with a rooftop mechanical penthouse and attached utility room. The building consists of a box line area, drum repack system, a special case waste area, a supercompactor area along with various maintenance rooms, filter rooms, electrical rooms, personnel areas, etc. The areas designated for storage and treatment are listed in Table D-3 in Attachment 1.F of this Permit. Absorption, decanting and neutralization of liquids are allowed in WMF-676 in the Box Lines, Supercompactor, and Drum Repack System. Miscellaneous treatment is described in Module IV of the permit.</p> <p>Primary containment is provided by the waste containers and secondary containment is provided in areas where free liquids are stored by a coating system that is applied to the floors, walls, and curbing, except where steel is used. Secondary containment may also be provided by spill pallets, or equivalent. Table D-2 in Attachment 1.F of this Permit describes the secondary containment capacity for the various storage areas and designates the number of allowed containers of MW that may be stored in the specific areas.</p>		
Capacity:	Container Storage:	91,268 Gallons	
	Container Treatment:	13,200 Gallons/Day	
Notes:			

III.A.4. The Permittee shall only store MW in containers which are identified in Attachments 1.A, 1.B, 1.C, 1.D., 1.E., and 1.F.

III.A.4.a. The Permittee shall not store waste in a bag or plastic wrapping material that, without treatment, is amenable for storage in the other approved containers identified in Attachments 1.A, 1.B, 1.C, 1.D, 1.E, and 1.F.

III.B. PERMITTED AND PROHIBITED WASTES IN THE CONTAINER STORAGE AREAS

III.B.1. The Permittee shall only store those wastes that are identified in Attachments 1 and 2 of this Permit in the MWMUs.

III.B.2. The Permittee shall meet the following storage configuration requirements for containers in the WSF:

Waste Storage Facility (WSF)		BUILDING #	WMF-628 – WMF-634
Dense Pack Authorized?:	Yes	Containers residing against an interior/exterior wall or structure of a building?:	No
Height:	<ul style="list-style-type: none"> <li>Drums shall not be stored more than five (5) drums high.</li> <li>Boxes shall not be stored more than (4) boxes high.</li> <li>TRUPACT payload assemblages (TPAs), as described in Attachment 1.A, shall not be stored more than one (1) TPA high.</li> <li>Ten-Drum Overpack (TDOPs), as described in Attachment 1.A, shall not be stored more than one (1) TDOP high.</li> <li>Stainless steel containers that are in-process or have been treated by macroencapsulation shall not be stored more than two (2) containers high.</li> <li>Repaired containers shall not be stored more than two (2) containers high.</li> </ul>		
Width	<ul style="list-style-type: none"> <li>Boxes and drums shall not be stored more than four (4) containers wide.</li> <li>TPAs shall not be stored more than one (1) TPA wide.</li> <li>TDOPs shall not be stored more than one (1) TDOP wide.</li> <li>Stainless steel containers that are in-process or have been treated by macroencapsulation shall not be stored more than two (2) containers wide.</li> <li>Repaired containers shall not be stored more than two (2) containers wide.</li> </ul>		
Aisle Spacing:	<ul style="list-style-type: none"> <li>The Permittee shall provide a minimum of twenty (20) feet of aisle space down the center of each Type II Module.</li> <li>A minimum of three (3) feet of aisle space will be maintained between rows of containers and all other rows of MW containers and all interior and exterior walls.</li> </ul>		
Notes:	<ul style="list-style-type: none"> <li>Aisle spacing requirements do not include support beams and portable equipment.</li> </ul>		

III.B.2.a. The Permittee shall meet the following storage configuration requirements for containers in the WSF when a container resides against an interior/exterior wall or structure of a building:

Waste Storage Facility (WSF)		BUILDING #	WMF-628 – WMF-634
Dense Pack?:	No	Containers residing against an interior/exterior wall or structure of a building?:	Yes
Height:	<ul style="list-style-type: none"> <li>Boxes and drums shall not be stored more than one (1) container high.</li> </ul>		
Width	<ul style="list-style-type: none"> <li>Boxes and drums shall not be stored more than one (1) container wide.</li> </ul>		
Aisle Spacing:	<ul style="list-style-type: none"> <li>The Permittee shall provide a minimum of twenty (20) feet of aisle space down the center of each Type II Module.</li> <li>A minimum of three (3) feet of aisle space will be maintained between rows of containers and all other rows of MW containers.</li> </ul>		
Notes:	<ul style="list-style-type: none"> <li>Aisle spacing requirements do not include support beams and portable equipment.</li> </ul>		

III.B.3. The Permittee shall meet the following storage configuration requirements for containers in the Type I Module:

Type I Module			BUILDING #	WMF-635
Dense Pack?:	Yes	Containers residing against an interior/exterior wall or structure of a building?:		No
Height:	<ul style="list-style-type: none"><li>• Drums shall not be stored more than five (5) drums high.</li><li>• Boxes shall not be stored more than (4) boxes high.</li><li>• TRUPACT payload assemblages (TPAs), as described in Attachment 1.A, shall not be stored more than one (1) TPA high.</li><li>• Ten-Drum Overpack (TDOPs), as described in Attachment 1.A, shall not be stored more than one (1) TDOP high.</li><li>• Stainless steel containers that are in-process or have been treated by macroencapsulation shall not be stored more than two (2) containers high.</li><li>• Repaired containers shall not be stored more than two (2) containers high.</li></ul>			
Width	<ul style="list-style-type: none"><li>• Boxes and drums shall not be stored more than four (4) containers wide.</li><li>• TPAs shall not be stored more than one (1) TPA wide.</li><li>• TDOPs shall not be stored more than one (1) TDOP wide.</li><li>• Stainless steel containers that are in-process or have been treated by macroencapsulation shall not be stored more than two (2) containers wide.</li><li>• Repaired containers shall not be stored more than two (2) containers wide.</li></ul>			
Aisle Spacing:	<ul style="list-style-type: none"><li>• A minimum of three (3) feet of aisle space will be maintained between rows of containers and all other rows of MW containers and interior/exterior walls.</li><li>• The Permittee shall provide an access aisle in the PAAA/WCRA area that is a minimum of ten (10) feet.</li></ul>			
Notes:	<ul style="list-style-type: none"><li>• Aisle spacing requirements do not include support beams and portable equipment.</li></ul>			

III.B.3.a. The Permittee shall meet the following storage configuration requirements for containers in the Type I Module when a container resides against an interior/exterior wall or structure of a building:

Type I Module			BUILDING #	WMF-635
Dense Pack?:	No	Containers residing against an interior/exterior wall or structure of a building?:		Yes
Height:	<ul style="list-style-type: none"><li>Boxes and drums shall not be stored more than one (1) container high.</li></ul>			
Width	<ul style="list-style-type: none"><li>Boxes and drums shall not be stored more than one (1) container wide.</li></ul>			
Aisle Spacing:	<ul style="list-style-type: none"><li>A minimum of three (3) feet of aisle space will be maintained between rows of containers and all other rows of MW containers and interior/exterior walls.</li><li>The Permittee shall provide an access aisle in the PAAA/WCRA area that is a minimum of ten (10) feet.</li></ul>			
Notes:	<ul style="list-style-type: none"><li>Aisle spacing requirements do not include support beams and portable equipment.</li></ul>			

III.B.4. The Permittee shall meet the following storage configuration requirements for containers in the SSA:

SWEPP Storage Area		BUILDING #	WMF-610
Dense Pack?:	No	Containers residing against an interior/exterior wall or structure of a building?:	No
Height:	<ul style="list-style-type: none"> <li>Boxes and drums shall not be stored more than three (3) drums high.</li> <li>Stainless steel containers that are in-process or have been treated by macroencapsulation shall not be stored more than two (2) containers high.</li> <li>Repaired containers shall not be stored more than two (2) containers high.</li> </ul>		
Width	<ul style="list-style-type: none"> <li>Boxes and drums shall not be stored more than four (4) containers wide.</li> <li>Stainless steel containers that are in-process or have been treated by macroencapsulation shall not be stored more than two (2) containers wide.</li> <li>Repaired containers shall not be stored more than two (2) containers wide.</li> </ul>		
Aisle Spacing:	<ul style="list-style-type: none"> <li>A minimum of three (3) feet of aisle space will be maintained between rows of containers and all other rows of MW containers</li> <li>A minimum of two (2) feet shall be maintained between rows of containers and interior/exterior walls.</li> </ul>		
Notes:	<ul style="list-style-type: none"> <li>Aisle spacing requirements do not include support beams and portable equipment.</li> </ul>		

III.B.4.a. The Permittee shall meet the following storage configuration requirements for containers in the SSA when a container resides against an interior/exterior wall or structure of a building:

SWEPP Storage Area		BUILDING #	WMF-610
Dense Pack?:	No	Containers residing against an interior/exterior wall or structure of a building?:	Yes
Height:	<ul style="list-style-type: none"> <li>Boxes and drums shall not be stored more than one (1) container high.</li> </ul>		
Width	<ul style="list-style-type: none"> <li>Boxes and drums shall not be stored more than one (1) container wide.</li> </ul>		
Aisle Spacing:	<ul style="list-style-type: none"> <li>A minimum of three (3) feet of aisle space will be maintained between rows of containers and all other rows of MW containers and interior/exterior walls.</li> </ul>		
Notes:	<ul style="list-style-type: none"> <li>Aisle spacing requirements do not include support beams and portable equipment.</li> </ul>		

III.B.5. Storage of MW at WMF-676 is authorized in the areas defined in Table D-2 of Attachment 1.F of this Permit. The Permittee shall meet the following storage configuration requirements for containers:

Treatment Facility		BUILDING #	WMF-676
Dense Pack Authorized?:	No	Containers residing against an interior/exterior wall or structure of a building?:	Yes and No
Height:	<ul style="list-style-type: none"> <li>Containers of MW shall not be stored more than two (2) containers high.</li> </ul>		
Width	<ul style="list-style-type: none"> <li>Containers of MW shall not be stored more than two (2) containers wide, provided that no container within the row resides against a wall of the building.</li> <li>Containers of MW shall not be stored more than one (1) container wide, provided that one side of a container resides against a wall of the building.</li> </ul>		
Aisle Spacing:	<ul style="list-style-type: none"> <li>The Permittee shall provide a minimum of two (2) feet of aisle space between all rows of containers.</li> </ul>		
Notes:	<ul style="list-style-type: none"> <li>Aisle spacing requirements do not include support beams and portable equipment.</li> <li>Containers with free liquids may not be stored in the following rooms, unless portable secondary containment pallets meeting the requirements of IDAPA 58.01.05.008 [40 CFR §264.175] are used:               <ul style="list-style-type: none"> <li>LLW Box Fill Room 128A;</li> <li>Vestibule Room 128;</li> <li>Secondary Waste Room 128B;</li> <li>Empty Container/LLW Export Room 128C;</li> <li>Area 300 HEPA Filter Room 214A;</li> <li>Terminal Filter Rooms 122A and 142B;</li> <li>Hydraulic Room 224C; and</li> <li>Filter Maintenance Rooms 212C, 212F, and 212H.</li> </ul> </li> <li>Containers greater than 987 gallons may not be stored in the Box Elevator (Room 009)</li> </ul>		

I.B.6. MW at the MWMUs shall only be stored in containers that are identified in Section D-1a(1) of Attachment 1.A of this Permit.

#### I.C. CONDITION OF CONTAINERS

III.C.1. If a container holding MW is not in good condition (e.g., significantly corroded, visibly pitted, apparent structural defects) or if it begins to leak, the Permittee shall either repair the container, transfer the MW from such container to a container that is in good condition, or otherwise manage the waste, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.171], the conditions of this Permit, Attachments 1 and 6, and as follows:

III.C.2. The Permittee shall store waste in containers at the MWMUs in accordance with Attachments 1.A, 1.B, 1.C, 1.D, 1.E, 1.F, and 6 of this Permit.

- III.C.3. Repaired containers shall not be stored in a dense pack configuration and shall be separated from the general population of containers of MW, unless the container is later overpacked or otherwise managed appropriately.
- III.C.4. Containers stored in a dense pack configuration that are found to have leaks/pinholes shall be repaired manually, as physically accessible without moving containers, within twenty-four (24) hours. The removal of a container that has either been repaired or requires repair, via reconfiguration of the waste stack, shall commence immediately. The Permittee shall continue such efforts as necessary to remove the container and reconfigure the stack until completion of the removal and reconfiguration. Upon removal of a container requiring repair (or removal of a container that has already been repaired) the container shall be stored in accordance with Permit Condition III.C.3, and the container shall be inspected for signs of additional leaks/pinholes. Any leaks/pinholes discovered during the inspection performed as part of initial reconfiguration shall be repaired within twenty-four (24) hours.
- III.C.5. The Permittee shall provide verbal notification to the Director of any container repair failures within seven (7) days of discovery. The report shall include, at a minimum, the drum identification number, the EPA HWN(s), cause of failure (if known), and corrective actions taken to prevent additional container repair failures. Containers that have had repair failures shall be overpacked. Container repair failure criteria are identified below:
- A container patch becoming dislodged, other than by physical means;
  - A container that has been repaired begins to leak;
  - The container develops new pinholes after the container has been completely repaired;
  - Any indication that the container is not in good condition (e.g., significant corrosion, structural defects).

I.D. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittee shall assure that the ability of the container to contain the waste is not impaired in accordance with IDAPA 58.01.05.008 [40 CFR § 264.172] and Attachments 1.A, 1.B, 1.C, 1.D, 1.E, 1.F and 6 of this Permit.

I.E. MANAGEMENT OF CONTAINERS

The Permittee shall manage MW containers in accordance with IDAPA 58.01.05.008 [40 CFR Part 264, Subpart I].

- I.E.1. In accordance with IDAPA 58.01.05.008 [40 CFR § 264.173], the Permittee shall keep all containers closed during storage, except when necessary to add or remove waste.
- I.E.2. The Permittee shall not open, handle, or store containers in a manner which may rupture the container or cause it to leak, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.173(b)] and Attachments 1 and 6 of this Permit. Drums vented to prevent the accumulation of radiolytically generated hydrogen are considered closed if the drums are stored upright with the vent up.



- III.E.3. Containers with suspect integrity may be stored in WMF-676 in the Central Conveyor System/Maintenance Area (Room 147/147D) or the Drum Assay Conveyor Area (Room 126C) subject to the following conditions:
- III.E.3.a. Containers with suspect integrity must be processed, repaired, and/or overpacked within seven (7) calendar days of discovery.
- III.E.3.b. All containers with free liquids and poor integrity will be processed or overpacked upon discovery or in the event that waste is released from a container, the container will be processed, overpacked, and/or repaired, and spill response will be initiated. Any leaks or spills that occur shall be noted in the Operating Record.
- III.E.3.c. Daily inspections of the containers with poor integrity will be performed to ensure that no leakage/spillage has occurred from the container.
- III.E.4. The Permittee shall not transfer opened containers via the Material Transfer System in WMF-676 until free liquids have been absorbed, removed, or containerized.
- III.F. SECONDARY CONTAINMENT SYSTEMS
- III.F.1. The Permittee shall maintain the secondary containment systems in accordance with IDAPA 58.01.05.008 [40 CFR § 264.175] and the attached plans and specifications, as contained in Attachments 1.A, 1.B, 1.C, 1.D, 1.E, and 1.F of this Permit.
- III.F.1.a. The secondary containment system shall be inspected daily from the time an anchor bolt or other floor penetrating device is removed until the secondary containment system is fully repaired. Spilled or leaked waste must be removed from the affected storage area in as timely a manner as is necessary to prevent release of material through penetrations in the secondary containment.
- III.F.2. The Permittee shall ensure that the secondary containment systems for the container storage areas, identified in Permit Condition III.A, are free of cracks and gaps to prevent any migration of waste or accumulated liquid out of the system to the soil, groundwater, or surface water at any time, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.175] and Attachments 1.A, 1.B, 1.C, 1.D, 1.E, and 1.F of this Permit.
- III.F.2.a. The Permittee must maintain the secondary containment as necessary to ensure that leaks and/or spills will not reach the concrete sealer.
- III.F.3. The Permittee shall not exceed the allowable number of MW containers or maximum liquid waste volume as indicated in Attachment 1.A, 1.B, 1.C, 1.D, and 1.E and Table D-2 of Attachment 1.F of this Permit.
- III.F.4. Secondary containment systems for container storage areas shall be constructed and maintained to contain 10% of the total volume of waste containers or 100% of the volume of the largest waste container, whichever is greater.
- III.F.4.a. Spill pallets, spill pans, or similar shall be capable of containing 10% of the total volume of the waste containers or 100% of the volume of the largest waste container being stored on the device, whichever is greater.

- III.F.5. Spilled/leaked MW and debris must be removed from the secondary containment system in accordance with IDAPA 58.01.05.008 [40 CFR § 264.175(b)(5)]. Any waste removed must be characterized in accordance with Permit Condition II.C and managed appropriately.
- I.F.6. Container storage areas that store only containers that do not contain free liquids are not required to have a secondary containment system, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.175(c)], provided that:
- The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation, or
  - The containers are elevated or are otherwise protected from contact with accumulated liquid.
- I.F.6.a. The following methods may be used to demonstrate that a container does not contain free liquids:
- I.F.6.a.(1). Process knowledge may be used for supercompacted waste, newly generated AMWTP waste and non-AMWTP newly generated waste if sufficient process knowledge exists to ensure that no free liquids are present. Process knowledge for supercompacted waste may take into account the effect of supercompaction on the waste.
- III. F.6.a.(2)(i) Real-Time Radiography (RTR) may be used to remotely examine any of the waste managed at the AMWTP to determine the presence of free liquids.
- III.F.6.a.(2)(ii) If RTR is used to demonstrate that containers do not contain free liquids, then at least two AMWTP personnel must verify that the container does not contain free liquids.
- III.F.6.a.(3) Visual Examination may be used to demonstrate that any container does not contain free liquids.
- I.F.6.b. Containers that have been treated by mechanical vibration must be provided with secondary containment while being stored.
- I.G. INSPECTION SCHEDULES AND PROCEDURES
- The Permittee shall inspect the MWMUs, in accordance with Permit Conditions II.I, III.E.3.c, and III.F.1.a of this Permit, to detect leaking containers and deterioration of containers and the containment system caused by corrosion and other factors.
- I.H. RECORDKEEPING
- The Permittee shall record the results of all inspections and waste analyses performed in the Operating Record in accordance with Permit Conditions I.Y.1, II.C, II.I, and II.N and IDAPA 58.01.05.008 [40 CFR § 264.73].

I.I. CLOSURE

The Permittee shall close the MWMUs in accordance with the procedures set forth in Permit Condition II.P of this Permit.

I.J. IGNITABLE OR REACTIVE WASTE

The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive wastes at the MWMUs by following the procedures specified in Attachment 6 of this Permit.

I.K. INCOMPATIBLE WASTE

I.K.1. The Permittee shall not place incompatible wastes or wastes and materials which are incompatible in the same container in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177] and as described in Attachments 1.A, 1.B, 1.C, 1.D, 1.E, 1.F and 6 of this Permit.

I.K.2. The Permittee shall not place MW or materials in an unwashed container that previously held an incompatible waste or material, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177(b)].

I.K.3. The Permittee shall not store a container holding MW that is incompatible with any waste or any materials stored nearby in containers without segregating these incompatible wastes or materials by protecting the wastes from commingling by means of a dike, berm, or wall in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177(c)] and Attachment 6 of this Permit.

I.K.3.a. Containers with waste from the halogenated organic reactivity group (as defined by EPA) that contain free liquids must be separated or physically segregated from containers with waste from the acids or oxidizers reactivity groups (as defined by EPA), in accordance with the "Chemical Compatibility Evaluation of Wastes for the AMWTP", RPT-ESH-014.

I.K.3.b. Containers with waste from the acids or oxidizers reactivity group that contain free liquids must be separated or physically segregated from containers of waste from the halogenated organics reactivity group, in accordance with the "Chemical Compatibility Evaluation of Wastes for the AMWTP", RPT-ESH-014.

I.K.3.c. Containers with waste from the caustics or acids reactivity group that contain more than 5 gallons of free liquids must be separated or physically segregated from the other reactivity group, in accordance with the "Chemical Compatibility Evaluation of Wastes for the AMWTP", RPT-ESH-014.

I.K.4. The Permittee shall inspect WMF-676 storage areas and remove any MW debris from a storage area prior to storing a potential incompatible waste in that storage area.

## **MODULE IV – MISCELLANEOUS UNITS in WMF-676**

### **IV.A. DESCRIPTION OF MISCELLANEOUS UNITS IN WMF-676**

The miscellaneous units consist of the Drum Repack System, Box Lines, SCW Glovebox System, and Supercompactor described in accordance with IDAPA 58.01.05.012 [40 CFR §§ 270.23(a)(1) and (a)(2)] and as follows:

- IV.A.1. The Box Lines in Attachments 1 and 1.F.i. of this Permit.
- IV.A.2. The SCW Glovebox System in Attachments 1 and 1.F.ii of this Permit.
- IV.A.3. The Supercompactor Unit in Attachments 1 and 1.F.iii of this Permit.
- IV.A.4. The Drum Repack System in Attachments 1 and 1.F.iv of this Permit.

### **IV.B. MISCELLANEOUS UNIT DESIGN AND CONSTRUCTION**

The Permittee shall design and construct the miscellaneous units in Permit Condition IV.A in accordance with Attachments 1, 1.F, 1.F.i, 1.F.ii, 1.F.iii, and 1.F.iv of this Permit.

### **IV.C. APPROVED WASTE**

The Permittee may treat MW meeting the general and unit-specific WACs as specified in Attachment 2 of this Permit.

### **IV.D. GENERAL MISCELLANEOUS UNIT MANAGEMENT PRACTICES**

- IV.D.1. The Permittee shall not place MW, treatment reagents, or other material in the MWMUs that may cause the units to rupture, leak, corrode, or otherwise fail.
- IV.D.2. The Permittee shall maintain the Operating Record in accordance with IDAPA 58.01.05.008 [40 CFR § 264.73] and Permit Condition I.Y.1 of this Permit.
- IV.D.3. The Permittee shall track waste movement through the MWMUs using the Operating Record, as described in Attachments 1.A, 1.F, 1.F.i, 1.F.ii, 1.F.iii, and 1.F.iv of this Permit.
- IV.D.4. The Permittee shall maintain the environmental performance standards for miscellaneous units in accordance with IDAPA 58.01.05.008 [40 CFR § 264.601], as described in Attachments 1.F, 1.F.i, 1.F.ii, 1.F.iii, and 1.F.iv of this Permit.
- IV.D.5. The Permittee shall consider a container to contain the nominal volume when considering throughput limits.

### **IV.E. VENTILATION AND PROCESS CONTAINMENT SYSTEMS**

- IV.E.1. The Permittee shall ensure that process ventilation systems and ancillary equipment including, but not limited to, vents, filters, and monitoring instruments used to control fugitive emissions shall be in operation prior to treatment operations being performed within the MWMUs in Permit Conditions IV.A.
- IV.E.2. High-efficiency particulate air (HEPA) filters shall be managed in accordance with the AMWTF Permit-To-Construct or any Title V Air Permit that would supersede the AMWTF Permit-To-Construct. The Permittee shall maintain HEPA filters in accordance with the American Society of Mechanical Engineers (ASME) Standard N510.
- IV.E.3. The Permittee shall ensure that the MWMU containment systems including, but not limited to, stainless steel liners, specialty-coated floors and curbs, airlock systems, dust sealing mechanisms, and variable geometry doors described in Attachments 1.F, 1.F.i, 1.F.ii, 1.F.iii, 1.F.iv and 6 of this Permit are in operation prior to treatment operations being performed in the MWMUs in Permit Conditions III.A and IV.A. At any time the MWMU containment systems cease to operate or prevent the release of contamination from the unit, the Permittee shall cease all waste treatment activity within affected area(s) the unit and shall ensure treatment activities remain inoperative until the MWMU containment systems are operating as designed.

IV.F. DRUM REPACK SYSTEM AND BOX LINE UNITS

- IV.F.1. The Permittee may manage the following waste in the Drum Repack System and Box Line Units:

Drum Repack System and Box Line Units		Process Code:	X02
Approved Waste:	<ul style="list-style-type: none"> <li>MW listed on pages 5F-1 to 5F-5 of the Part A Application (Attachment 1 of this Permit),</li> <li>MW with unknown EPA HWNs and/or unknown IDCs in accordance with Permit Condition II.E.4, and</li> <li>Waste meeting the Drum Repack System and Box Line Unit-Specific WAC in Attachment 2 of this Permit.</li> </ul>		
Approved Activities:	<ul style="list-style-type: none"> <li>The Permittee may perform sampling, sorting, visual examination, separating/segregating, size reduction, and/or repackaging as described in Attachments 1.F, 1.F.i, and 1.F.iv of this Permit.</li> <li>The Permittee may perform absorption, decanting, and neutralization of liquids, in accordance with Attachments 1, 1.A, and 1.F.i and 1.F.iv and Module V of this Permit.</li> </ul>		
Throughput:	Drum Repack System: 2,956 gallons per day Box Lines: 10,475 gallons per day		
Operation Standards:	The Permittee shall comply with the operations standards in Attachments 1.F, 1.F.i, and 1.F.iv of this Permit for sampling, sorting, visually examining, separating/segregating, and/or size reducing waste in the units.		

- IV.F.1.a. The Permittee shall manage containers of MW in accordance with Module III of this Permit.
- IV.F.1.b. The Permittee shall manage free liquids generated in the box lines or the drum repack system by the methods described in Attachments 1.F.i and 1.F.iv of this Permit.

IV.F.1.c. The Permittee shall establish procedural controls to ensure that uncontainerized waste does not fall through the drum port doors into the drum transfer areas below the Box Lines.

IV.F.1.c.(1). The areas below the Box Lines shall be inspected at a minimum of once per week to detect any uncontainerized waste that may have fallen through the drum port door.

IV.F.1.c.(2). Waste spilled through the drum port doors into the drum transfer areas below the Box Lines discovered during the inspections required in IV.F.1.c. (1) must be removed from the drum transfer area or containerized in a timely manner.

IV.F.1.d. The Permittee shall follow the special precautions to prevent reaction of ignitable, reactive, or incompatible waste in the Drum Repack System and Box Lines described in Attachment 6 of this Permit.

IV.F.2. The Permittee shall inspect the sumps, secondary containment systems, central conveyer system, and gloveports between incompatible waste treatment sequences for accumulation or spills in accordance with IDAPA 58.01.05.008 [40 CFR § 264.602] and Permit Condition II.I, as described in Attachment 4 of this Permit.

IV.F.2.a. The Permittee shall inspect the gloveboxes between incompatible waste treatment sequences for leakage, spills, wear and tear of gloves, and other physical damage, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.602] and Permit Condition II.I, as described in Attachment 4 of this Permit.

#### IV.G. SCW GLOVEBOX SYSTEM

IV.G.1. The Permittee may manage the following wastes in the SCW Glovebox System:

SCW Glovebox System		Process Code:	X99
Approved Waste:	<ul style="list-style-type: none"> <li>The MW listed on pages 5H-1 to 5H-5 of the Part A Permit Application (Attachment 1 of this Permit),</li> <li>Pressurized containers, and</li> <li>Waste meeting the SCW Glovebox System-Specific WAC in Permit Condition II.G of this Permit.</li> </ul>		
Approved Activities:	<ul style="list-style-type: none"> <li>The Permittee may absorb, decant, and neutralize liquids in accordance with the methods described in Attachments 1, 1.A and 1.F.ii of this Permit and Module V.</li> <li>Depressurization of pressurized containers in accordance with IV.G.2.c.</li> <li>Sampling of SCW from waste containers and residual liquids recovered from the box lines, drum repack system and the supercompactor.</li> </ul>		
Throughput:	SCW Glovebox System: 200 gallons/day		
Operation Standards:	The Permittee shall comply with the operations standards in Attachments 1.F and 1.F.ii of this Permit for treatment performed in the SCW Glovebox System.		

#### IV.G.2. SCW Glovebox System Waste Management Practices

IV.G.2.a. The Permittee shall manage all unlabelled inner containers and wastes that cannot be characterized by process knowledge that are received at the SCW Glovebox

System as unknowns until characterization of waste, in accordance with Permit Condition II.C.11, has been completed.

IV.G.2.b. The Permittee shall manage all waste placed in the SCW Glovebox System in accordance with IDAPA 58.01.05.008 [40 CFR Part 264.17] and Attachment 1.F.ii.

IV.G.2.c. The Permittee may depressurize up to three pressurized containers per twenty-four (24) hour period subject to the following conditions:

IV.G.2.c.(1). Containers with unknown contents shall not be depressurized except as authorized by Permit Condition IV.G.3.

IV.G.2.c.(2). Depressurization of containers shall not result in air emissions that constitute an unacceptable risk to human health or the environment as determined by the short term Occupation Safety and Health Administration (OSHA) exposure limits for workers. Containers rejected for depressurization shall be placed in storage.

IV.G.2.c.(3). Any liquids generated during the depressurization of a container shall be collected and managed appropriately.

IV.G.2.c.(4). The depressurization area shall be decontaminated, as necessary, after each container depressurization to assure compliance with IDAPA 58.01.05.008 [40 CFR § 264.17].

#### IV.G.3. Pressurized Containers Not In Good Condition

IV.G.3.a. In the event of the discovery of a pressurized container not in good condition and where the procedures set forth in Permit Condition IV.G.2.c above cannot be followed, the Permittee shall immediately notify the Department, as set forth in Permit Condition I.X. This notification may be made in writing or by telephone and shall include the following:

- Size of the container.
- Type of container (aerosol can, bulged can, other pressurized container, etc.).
- A description of any markings on the container.
- Availability of properly sized overpack container.
- A specific plan for managing the container subject to Department approval.

IV.G.3.b. If the Department authorizes the depressurization of an unknown container not in good condition, the Permittee shall sample to determine the chemical nature of the material released.

IV.G.3.c. The Permittee shall place a summary of the events associated with the unknown container depressurization in the Operating Record in accordance with Permit Condition I.Y.1.c.

#### IV.G.4. Inspections and Maintenance

The Permittee shall conduct the inspections identified in Attachment 4. These inspections shall be recorded in accordance with Permit Conditions II.I and II.N.

IV.G.5. Compliance Schedule

Prior to the installation of the lab gas cylinder depressurization device for the SCW Glovebox System, the Permittee shall submit final design drawings and specifications to the Director.

IV.H. SUPERCOMPACTOR UNIT TREATMENT

IV.H.1. Approved Waste

Supercompactor Unit		Process Code:	X99
Approved Waste:	<ul style="list-style-type: none"> <li>MW listed on pages 5G-1 to 5G-5 of the Part A Application (Attachment 1 of this Permit), and</li> <li>MW meeting the Supercompactor Unit-Specific WAC in Attachment 2 of this Permit.</li> </ul>		
Approved Activities:	<ul style="list-style-type: none"> <li>The Permittee may perform supercompaction as described in Attachment 1.F.iii of this Permit.</li> <li>The Permittee may absorb, decant, and neutralize free liquids in accordance with the methods described in Attachments 1, 1.A. and 1.F.iii and Module V of this Permit.</li> </ul>		
Throughput:	Supercompactor Unit: 10,312 gallons/day		
Operation Standards:	<ul style="list-style-type: none"> <li>The Permittee shall comply with the operations standards in Section D-8a(7) of Attachment 1.F.iii of this Permit for performing supercompaction.</li> </ul>		

IV.H.1.a. The Permittee may not manage the following waste in the Supercompactor Unit:

- MW with unknown EPA HWNs or unknown IDCs/WG,
- MW containing free liquids at greater than 5% by volume,
- MW containing small intact containers with an excess of 1 in. of liquids,
- MW containing free liquid mercury, or
- MW containing other non-debris items such as non-vented gas cylinders.

IV.H.2. Supercompactor Unit Management Practices

IV.H.2.a. The Permittee shall evaluate/analyze waste for the presence of oxidizers and pyrophorics prior to treatment in the Supercompactor Unit in accordance with Permit Condition II.G and Attachment 1.F.iii of this Permit.

IV.H.2.b. The Permittee shall manage containers of MW in accordance with Module III of this Permit.

IV.H.2.c. The Permittee shall manage free liquids generated during the supercompaction process by the methods described in Attachment 1.F.iii of this Permit.

IV.H.2.c.(1). The Permittee shall empty the supercompactor sump at the end of a compaction cycle if the sump overflows during the compaction cycle.

IV.H.2.d. The Permittee shall follow the special precautions to prevent reaction of ignitable, reactive, or incompatible waste in the Supercompactor Unit described in Attachment 6 of this Permit.



IV.H.3. Inspections

- IV.H.3.a. The Permittee shall inspect all Supercompactor glovebox surfaces and sump(s) between incompatible waste treatment sequences for waste accumulation or liquids in accordance with IDAPA 58.01.05.008 [40 CFR § 264.602] and Permit Condition II.I, as described in Attachments 1.F.iii and 4 of this Permit.
- IV.H.3.b. The Permittee shall inspect all surfaces of the Puck Staging Area between incompatible waste treatment sequences for waste accumulation or liquids in accordance with IDAPA 58.01.05.008 [40 CFR § 264.602] and Permit Condition II.I, as described in Attachments 1.F.iii and 4 of this Permit.

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## **MODULE V – TREATMENT**

### **V.A. ABSORBENT ADDITION**

Subject to the terms of this Permit, the Permittee may treat MW through the addition of absorbent material in the MWMUs. See Attachments 1, 1.A and 1.F for a description of the locations for absorption in the MWMUs.

- V.A.1. The treatment process, absorbent addition, consists of equipment placed within the MWMUs to provide for container handling, absorbent handling and contamination control to allow for the opening of containers for treatment purposes and the addition of absorbent material. Opening of containers and addition of absorbent is performed as described in Attachments 1, 1.A, 1.B, 1.C, 1.D, 1.E, and 1.F.
- V.A.1.a. The Permittee shall only perform the addition of absorbent within containers when performed in the WSF or SWEPP.
- V.A.2. The treatment of MW, through absorbent addition (Process Code T04), is authorized with a total throughput rate not to exceed the following:
- 7,040 gallons per day in the WSF and SWEPP, and
  - 4,400 gallons per day in WMF-676.
- V.A.3. Wastes acceptable for the treatment process are wastes that have been characterized as having the EPA HWNs defined on the current Part A Permit Application for this Permit.
- V.A.4. Aqueous-based or organic free liquids may be treated as described in Attachment 1.A.
- V.A.5. During the treatment process, the Permittee shall not place incompatible wastes, or wastes and materials that are incompatible, in the same container, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177].
- V.A.6. Treatment of drums with insufficient headspace to accommodate the required volume of sorbent is not authorized.
- V.A.7. The Permittee shall inspect the absorbent addition activity in accordance with Permit Condition II.I and Attachment 4 of this Permit.
- V.A.8. The Permittee shall document inspection and operation of the absorbent addition process in the Operating Record, in accordance with Permit Conditions I.Y and II.I.
- V.A.9. The Permittee shall report any treatment failures within fourteen (14) days of discovery, in accordance with Permit Conditions I.L and I.X. The report shall include, at a minimum, the drum identification number, the EPA HWN(s), cause of failure (if known), and measures taken to prevent additional treatment failures.

V.B. DECANTING

Subject to the terms of this Permit, the Permittee may treat MW through decanting of liquids, by methods other than pouring, in the MWMUs. See Attachment 1, 1.A and 1.F for a description of the locations for decanting in the MWMUs.

- V.B.1. The treatment process, decanting, consists of equipment placed within the MWMUs to allow for decanting of liquids and container handling during such treatment, as described in Attachments 1.A, 1.B, 1.C, 1.D, 1.E, and 1.F.
- V.B.2. The treatment of MW, through decanting (Process Code T04), is authorized with a total throughput rate not to exceed the following:
- 7,040 gallons per day in the WSF and SWEPP, and
  - 4,400 gallons per day in WMF-676.
- V.B.3. Wastes acceptable for the treatment process are wastes that have been characterized as having the EPA HWNs defined on the current Part A Permit Application for this Permit.
- V.B.4. During the treatment process, the Permittee shall not place incompatible wastes, or wastes and materials that are incompatible, in the same container, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177].
- V.B.5. The Permittee shall inspect the decanting activities, in accordance with Permit Condition II.I and Attachment 4 of this Permit.
- V.B.6. The Permittee shall document inspection and operation of the decanting processes in the Operating Record, in accordance with Permit Conditions I.Y and II.I.
- V.B.7. The Permittee shall report any treatment failures within fourteen (14) days of discovery, in accordance with Permit Conditions I.L and I.X. The report shall include, at a minimum, the drum identification number, the EPA HWN(s), cause of failure (if known), and measures taken to prevent additional treatment failures.

V.C. NEUTRALIZATION

Subject to the terms of this Permit, the Permittee may treat MW through the neutralization of liquids in the MWMUs. See Attachment 1, 1.A and 1.F for a description of the locations for neutralization in the MWMUs.

- V.C.1. The treatment process, neutralization, consists of equipment placed within the MWMUs to allow for the neutralization of liquids and container handling during the treatment process, as described in Attachments 1.A, 1.B, 1.C, 1.D, 1.E, and 1.F.
- V.C.1.a. The Permittee shall only treat MW waste by neutralization within containers in the WSF and SWEPP.
- V.C.2. The treatment of MW, through neutralization (Process Code T04), is authorized with a total throughput rate not to exceed the following:

- 7,040 gallons per day in the WSF and SWEPP, and
- 4,400 gallons per day in WMF-676.

- V.C.3. Wastes acceptable for the treatment process are wastes that have been characterized as having the EPA HWNs defined on the current Part A Permit Application for this Permit.
- V.C.4. During the treatment process, the Permittee shall not place incompatible wastes, or wastes and materials that are incompatible, in the same container, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177].
- V.C.5. The Permittee shall inspect the neutralization activities, in accordance with Permit Condition II.I and Attachment 4 of this Permit.
- V.C.6. The Permittee shall document inspection and operation of the neutralization processes in the Operating Record, in accordance with Permit Conditions I.Y and II.I.
- V.C.7. The Permittee shall report any treatment failures within fourteen (14) days of discovery, in accordance with Permit Conditions I.L and I.X. The report shall include, at a minimum, the drum identification number, the EPA HWN(s), cause of failure (if known), and measures taken to prevent additional treatment failures.
- V.D. **REPACKAGING**
- Subject to the terms of this Permit, the Permittee may treat MW in containers through the repackaging of waste in the WSF and SWEPP. See Attachments 1 and 1.A for a description of the locations for repackaging in the WSF and SWEPP.
- V.D.1. The treatment process, repackaging, consists of equipment placed within the WSF and SWEPP to provide for container handling and contamination control to allow opening of containers for the repackaging of waste. Opening of containers and repackaging is performed as described in Attachments 1.A, 1.B, 1.C, 1.D, and 1.E.
- V.D.2. The treatment of MW, through repackaging (Process Code T04), is authorized with a total throughput rate not to exceed 7,040 gallons per day in the WSF and SWEPP.
- V.D.3. Wastes acceptable for the treatment process are wastes that have been characterized as having the EPA HWNs defined on the current Part A Permit Application for this Permit.
- V.D.4. During the treatment process, the Permittee shall not place incompatible wastes, or wastes and materials that are incompatible, in the same container, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177].
- V.D.5. The Permittee shall inspect the repackaging activity in accordance with Permit Condition II.I and Attachment 4 of this Permit.
- V.D.6. The Permittee shall document inspection and operation of the repackaging process in the Operating Record, in accordance with Permit Conditions I.Y and II.I.

V.E. SIZING

Subject to the terms of this Permit, the Permittee may treat MW in containers through the physical sizing of waste in the WSF and SWEPP. See Attachment 1 and 1.A for a description of the locations for sizing in the WSF and SWEPP.

- V.E.1. The treatment process, sizing, consists of equipment placed within the WSF and SWEPP to provide for container handling and contamination control to allow opening of containers for the sizing of waste. Opening of containers and sizing is performed as described in Attachments 1.A, 1.B, 1.C, 1.D, and 1.E.
- V.E.2. The treatment of MW, through sizing (Process Code T04), is authorized with a total throughput rate not to exceed 7,040 gallons per day in the WSF and SWEPP.
- V.E.3. Wastes acceptable for the treatment process are wastes that have been characterized as having the EPA HWNs defined on the current Part A Permit Application for this Permit.
- V.E.4. During the treatment process, the Permittee shall not place incompatible wastes, or wastes and materials that are incompatible, in the same container, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177].
- V.E.5. The Permittee shall inspect the sizing activity in accordance with Permit Condition II.I and Attachment 4 of this Permit.
- V.E.6. The Permittee shall document inspection and operation of the sizing process in the Operating Record, in accordance with Permit Conditions I.Y and II.I.

V.F. MECHANICAL VIBRATION

Subject to the terms of this Permit, the Permittee may treat MW in containers through the mechanical vibration of waste in the WSF and SWEPP. See Attachment 1 and 1.A for a description of the locations for mechanical vibration in the WSF and SWEPP.

- V.F.1. The treatment process, mechanical vibration, consists of equipment placed within the WSF and SWEPP to provide for container handling and contamination control to allow for mechanical vibration of the waste. Mechanical vibration of containers is performed as described in Attachments 1.A, 1.B, 1.C, 1.D, and 1.E.
- V.F.2. The treatment of MW, through mechanical vibration (Process Code T04), is authorized with a total throughput rate not to exceed 7,040 gallons per day in the WSF and SWEPP.
- V.F.3. Wastes acceptable for the treatment process are wastes that have been characterized as having the EPA HWNs defined on the current Part A Permit Application for this Permit.
- V.F.3.a. Prior to mechanical vibration of waste other than IDC RF003 waste, the Permittee must provide a written assessment of the waste in the Operating Record. The assessment must specify how the waste differs from IDC RF003 waste and describe

any special precautions that may be necessary to ensure protection of human health and the environment during treatment.

- V.F.4. The Permittee shall inspect the mechanical vibration activity in accordance with Permit Condition II.I and Attachment 4 of this Permit.
- V.F.5. The Permittee shall document inspection and operation of the mechanical vibration process in the Operating Record, in accordance with Permit Conditions I.Y and II.I.
- V.F.6. The Permittee, within forty-eight (48) hours of discovery, shall provide verbal notification to the Director when either the container or the overpack container, if applicable, develops a breach or otherwise fails unexpectedly during the mechanical vibration treatment process. The report shall include, at a minimum, the drum identification number, the EPA HWN(s), type of failure (if known), and the extent of leakage from the drum (if applicable).
- V.F.7. The Permittee shall take any precautions necessary to prevent accidental reactions from occurring during mechanical vibration of a container in accordance with IDAPA 58.01.05.008 [40 CFR § 264.17].
- V.F.8. In accordance with IDAPA 58.01.05.008 [40 CFR § 264.173], the Permittee shall not mechanically vibrate any container where the mechanical vibration may rupture the container or cause it to leak.
- V.F.9. Mechanical vibration shall be limited to one container per vibration table during treatment.
- V.F.10. Treatment of containers by mechanical vibration must be discontinued if a container ever leaves the vibration table as a result of treatment, and DEQ must be verbally notified within twenty-four (24) hrs of the incident. Mechanical vibration treatment may not resume until verbal authorization is provided by DEQ.
- V.F.11. Mechanical Vibration must be performed in an area with secondary containment.

V.G. TREATMENT THROUGHPUT

Treatment of MW in the WSF and SWEPP is authorized for liquid absorption, liquid decanting, liquid neutralization, sizing, repackaging, and mechanical vibration at a total throughput rate not to exceed 21,120 gallons/day.

V.H. MACROENCAPSULATION

Subject to the terms of this Permit, the Permittee may treat MW in containers through the macroencapsulation of waste in stainless steel containers in the WSF and SWEPP. See Attachment 1.A for a description of the locations for macroencapsulation in the WSF and SWEPP.

- V.H.1. The treatment process, macroencapsulation, consists of equipment placed within the WSF and SWEPP to provide for container handling and contamination control to allow for the macroencapsulation of waste. Macroencapsulation is performed as described in Attachments 1.A, 1.B, 1.C, 1.D, and 1.E.

- V.H.2. The treatment of MW, through macroencapsulation (Process Code T04), is authorized with a throughput rate not to exceed an annualized average (rolling 12 month average) of 5,280 gallons per day in the WSF and SWEPP.
- V.H.2.a. The Permittee shall document in the Operating Record the amount of treatment via Macroencapsulation performed each day when such treatment occurs and the total amount of treatment via Macroencapsulation performed during the twelve (12) month period previous to that day.
- V.H.3. Wastes acceptable for the treatment process are defined as wastes that have been characterized as having the EPA HWNs defined on the current Part A Permit Application for this Permit.
- V.H.4. During the treatment process, the Permittee shall not place incompatible wastes, or wastes and materials that are incompatible, in the same container, in accordance with IDAPA 58.01.05.008 [40 CFR § 264.177].
- V.H.5. The Permittee shall inspect the macroencapsulation activity in accordance with Permit Condition II.I and Attachment 4 of this Permit.
- V.H.6. The Permittee shall document inspection and operation of the macroencapsulation process in the Operating Record, in accordance with Permit Conditions I.Y and II.I.

## MODULE VI - CORRECTIVE ACTION

### VI.A. APPLICABILITY

- VI.A.1. Sections 3004(u) and 3004(v) of RCRA (42 U.S.C. §§ 6924(u) and (v), HWMA (Idaho Code § 39-4409(5)), and IDAPA 58.01.05.008 [40 CFR § 264.101] require corrective action, as necessary, to protect human health and the environment from all releases of HW or HW constituents from any solid waste management unit at the facility for all permits issued after November 8, 1984. A Federal Facility Agreement (FFA) under Section 120(e)(2) of the Comprehensive Environmental Response and Liability Act (CERCLA, 42 U.S.C. § 9620) is a mechanism to be used to investigate and clean up releases of HW and HW constituents, as necessary to protect human health and the environment. On December 4, 1991, the U.S. Environmental Protection Agency, the state of Idaho, and the United States Department of Energy (Parties) executed an FFA and consent order (FFA/CO) to integrate and satisfy the requirements of CERCLA and the corrective action requirements of HWMA/RCRA. The FFA/CO is incorporated into the Final Partial-Permit for the Materials and Fuels Complex Combined Permit for the Idaho National Engineering and Environmental Laboratory, effective date August 16, 2004, and fully enforceable through that partial-permit as corrective action requirements. The corrective action obligations and compliance schedules of the FFA/CO and of the above referenced partial-permit are hereby incorporated herein by reference and are made a condition of this Permit. All final modifications to the corrective action obligations or compliance schedules of the Final Partial-Permit for the Materials and Fuels Complex Combined Permit for the Idaho National Engineering and Environmental Laboratory, August 16, 2004, or of the FFA/CO shall automatically be incorporated herein and are made a condition of this Permit.
- VI.A.2. Regardless of whether or not the FFA/CO and the Final Partial-Permit for the Materials and Fuels Complex Combined Permit for the Idaho National Engineering and Environmental Laboratory are vacated, the Permittee's corrective action obligations and schedules, as incorporated herein under Permit Condition VI.A above, continue to be enforceable conditions of this Permit.
- VI.A.3. Closure of the MWMUs and termination of this Permit is authorized provided corrective action has been satisfactorily completed under either Permit Condition VI.A or VI.B or the Permittee has obtained a new permit for corrective action in accordance with Permit Conditions I.G and I.H. The Permittee is obligated to complete corrective action regardless of the operational status of the MWMUs.



**TABLE 1**

Report Due Dates	
Other Noncompliance	February 1 <sup>st</sup> and August 1 <sup>st</sup>
Certification of Waste Minimization	March 1 <sup>st</sup>
4 Year Waste Minimization Plan	March 31 <sup>st</sup> of 2011 and 2015
Biennial Report	March 1 <sup>st</sup> of 2010, 2012, 2014, 2016, 2018
Source Reduction Evaluation	March 31 <sup>st</sup> of 2011 and 2015
Equivalent/Superior Determinations	February 1 <sup>st</sup> and August 1 <sup>st</sup>

## REFERENCES

### Permit Application Information

- Section J – Corrective Action for Solid Waste Management Units, page J-1.
- Section K – Other Federal Laws, pages K-1 – K-3.
- Supplement II – 100-Year Floodplain and 25-Year Runoff Analyses for the Radioactive Waste Management Complex Area at the Idaho National Engineering and Environmental Laboratory, pages 1 – 42 and Appendix A.
- Supplement III – PUREX Waste Solidification, WSRC-TR-2001-00526, Revision 0 and Aqueous and Oil/Organic Liquid TRU Waste Solidification Method Test Plan and Report, PRO-1582-PQP/PQR, Revision 0.
- Supplement IV – 25-Year, 24-Hour Storm Evaluation for the Advanced Mixed Waste Treatment Project, RPT-367, pages 1 – 34.
- Supplement V – AMWTP Waste Stream Designations, RPT-TRUW-12, Rev 9.
- Supplement VI – Content Code Assessments for INEL Contact-Handled Stored Transuranic Wastes, WY-F1-82-021, October 1982
- Supplement VII – Chemical Compatibility Evaluation of Wastes for the Advanced Mixed Waste Treatment Project, RPT-ESH-014, Rev 4.
- Supplement VIII – Employee Position Title, Job Description, Qualifications and Training Requirements
- Supplement IX – AMWTP Emergency Plan/RCRA Contingency Plan, MP-EP&C-12.1, Rev. 12, October 2007
- Supplement X – U.S. Department of Energy – Idaho Operations Office Memorandums of Agreement and Memorandums of Understanding